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Investigating the Effects of Motivational Interviewing compared to Action Planning on Supporting the Emotional and Academic Success of Ninth Grade Students in Advanced Placement Classes

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Investigating the Effects of Motivational Interviewing compared to Action Planning on Supporting the Emotional and Academic Success of Ninth Grade Students in Advanced Placement Classes

by

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of the requirements for the degree of
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Abstract

High school students in accelerated curricula (i.e., Advanced Placement classes or pre-International Baccalaureate program) tend to report higher level of perceived stress compared to general education students due to additional academic demands that stemmed from accelerated courses (Suldo & Shaunessy-Dedrick, 2013). However, this group of students often receives limited if any targeted supports in schools because they tend to perform well academically (Suldo, O'Brennan, Storey, & Shaunessy-Dedrick, 2018). To address this gap in literature, this study investigated the efficacy of a targeted intervention in development to support academic and emotional success among students in accelerated curricula, namely the Motivation, Assessment, and Planning (MAP) intervention. MAP involves up to two one-on-one coaching sessions rooted in Motivational Interviewing (MI) techniques. The intervention aims to help students in accelerated curricula further develop coping or engagement strategies learned in an accompanying universal intervention termed the Advancing Coping and Engagement program (ACE; Suldo, Parker, Shaunessy-Dedrick, & O'Brennan, 2019). In this study, the efficacy of the MAP intervention was compared to an Action Planning (AP) intervention through a randomized, within subject design. Twenty 9th grade students taking Advanced Placement Human Geography from one high school who exhibited emotional and/or academic risks participated in this study. Wilcoxon Signed-Rank test revealed that participants reported significantly higher importance to change ($S = 35.5$, $N = 20$, $p = 0.04$) after receiving MAP compared to AP intervention. In addition, the interventionist/coach reported significantly higher therapeutic alliance ($S = 95$, $N = 20$, $p < .001$) with participants after MAP compared to AP meetings. Although there were no

significant differences for other outcome and acceptability variables (i.e., confidence to change, student-report therapeutic alliance, goal attainment, and student satisfaction), the direction of the trends in the data all favored MAP over AP meetings except for goal attainment. Wilcoxon Signed Rank tests also revealed significant order effects for two outcome variables; participants reported higher therapeutic alliance (S = -18.5, N = 20, p = .03) and progress towards goal (S = -18, N = 20, p = .04) after the second meeting, no matter to which condition they were assigned. Qualitative analyses (constant comparative method) of written and verbal data provided by student participants after each meeting and termination indicated themes with regard to (a) most useful parts of meetings, (b) good and bad parts of meetings, (c) differences between meetings, and (e) additional comments. Overall, analyses of qualitative data revealed inconclusive findings. It is unclear whether participants find MAP more acceptable than AP, and vice versa. However, some qualitative themes support the order effects found in quantitative analyses. The current study contributed to the literature by examining how the MAP, in comparison to an AP intervention, affects Advanced Placement students' perceived importance of and confidence to change, therapeutic alliance, goal attainment, and acceptability.

Chapter I: Introduction

The transition from middle to high school is full of challenges. Many students who performed well in middle school struggle academically, emotionally, and socially in high school (Cohen & Smerdon, 2009). Not only do they experience greater pubertal changes and increased academic demands, they are also forced to navigate through self-identity exploration in a new social context. These stressors often put 9th grade students at-risk for worse academic and emotional outcomes, such as lower attendance (Benner & Wang, 2011), engagement (Eccles & Roeser, 2011), and course grades (Benner & Graham, 2009). Unfortunately, a review of the current literature revealed that most of the existing social-emotional interventions are developed for elementary and middle school students (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Hoagwood et al., 2007). Moreover, there is a group of high school students who tend to report higher level of perceived stress compared to general education student but often receive limited if any targeted support in schools because they tend to perform well in academics (Suldo, O'Brennan, Storey, & Shaunessy-Dedrick, 2018; Suldo & Shaunessy-Dedrick, 2013). In the current study, this group is referred to as students in accelerated curricula, specifically high school students who are taking either Advanced Placement classes or enrolled in the pre-International Baccalaureate program.

Statement of the Problem

As the field of education continues to adopt the Multi-Tiered Systems of Support (MTSS) model that stemmed from the public health approach to meet *all* students' needs through early prevention and systematic intervention, researchers have worked hard to develop universal and

targeted interventions to meet various student needs. Meta-analysis has shown that universal social-emotional programs are effective in preventing academic decline and emotional burnout (Durlak et al., 2011); whereas studies on various targeted social-emotional interventions have demonstrated promising results (Melnyk et al., 2015; Snape & Atkinson, 2016; Weisz et al., 2012). Nonetheless, not *all* students' needs have been considered. Specifically, students in accelerated curricula (i.e., students taking Advanced Placement classes or enrolled in pre-IB program) have been traditionally underserved in schools (Suldo, O'Brennan, Storey, & Shaunessy-Dedrick, 2018). The existing evidence-based supports are usually designed for general education students or students with disabilities, thus do not fit well with the unique needs of students in accelerated curricula. To fill in this gap in literature, Suldo, Shaunessy-Dedrick, Ferron, and Dedrick (2018) first conducted a large-scale exploratory study to identify predictors of success for students in accelerated curricula. Then, with funding from the Institute of Education Science (IES) in a grant (R305A150543) awarded to Drs. Shannon Suldo and Elizabeth Shaunessy-Dedrick (University of South Florida, College of Education), a comprehensive intervention designed for students in accelerated curricula is under development. Consistent with the MTSS framework, the intervention includes a universal component (Advancing Coping and Engagement, ACE), screening procedure, and a targeted intervention (Motivation, Assessment, and Planning, MAP).

As part of the IES grant, two implementation trials have been carried out to test the efficacy of the intervention in development. The targeted intervention – MAP—was found to be feasible and acceptable (Suldo, Smith, Strait, Shum, Lee, & O'Brennan, 2018). MAP entails one to two 50-minutes one-on-one coaching session(s) based on the Motivational Interviewing (MI) approach. As MI has shown promising results with middle and high school students (e.g.,

increase engagement and academic achievement; Snape & Atkinson, 2016), it seems to be an appropriate counseling approach to use with students in accelerated curricula who are at-risk for diminished academic or emotional success. As mentioned, preliminary findings from the two implementation trials support this sentiment (participants liked the intervention materials, are likely to recommend the meeting to someone else, and self-reported making progress towards self-determined goal). However, there is still much to learn about the efficacy of MAP. Of interest is qualitative feedback provided by school mental health practitioners (Suldo, Shaunessy-Dedrick, O'Brennan, Lee, & Shum, in progress). Collectively, 12 district-employed school psychologists who listened to de-identified audio files of sample MAP meetings suggested that the last part of MAP (action planning) is the most important part compared to the other three parts (engaging, focusing, evoking). MI experts suggest otherwise, stating that the first three processes of MI act as a foundation for action planning and without those processes the intervention would not be considered MI-based at all (Miller & Rollnick, 2012). A review of the literature showed that Action Planning (AP) has been established as a stand-alone intervention in the adult health literature (Bélanger-Gravel et al., 2013) and has been successful in encouraging behavior change among students as an embedded component of popular school-based interventions such as Cognitive-Behavioral and Behavior Therapy (Kendall, 2011; Kratochwill & Stoiber, 2000). On the other hand, school-based student-focused MI has also shown promising evidence for its effectiveness (Snape & Atkinson, 2016). Examining this contradiction leads to a gap in the current literature – there is a need to examine the efficacy of MAP compared to AP intervention.

Purpose of the Current Study

The purpose of the current study was to add to the current literature on the efficacy of school-based student-focused MI interventions. Specifically, the study examined the efficacy of a MI-based intervention under development to support success among students in accelerated curricula, namely the Motivation, Assessment, and Planning (MAP) intervention. In line with the MI approach, MAP consists of four processes – engaging, focusing, evoking, and planning. The aim of MAP is to help students in accelerated curricula who show early signs of academic or emotional problems further develop coping and engagement skills that are associated with success among this group of students. Although participants from implementation trials find MAP acceptable and helpful in supporting them making progress towards self-determined goals, there is a need to further examine this intervention's efficacy. For instance, many school mental health practitioners perceived the last process (planning) as the most important part of MAP. This sentiment is inconsistent with the view of MI experts who advocate for the importance of the first three processes (engaging, focusing, evoking; Miller & Rollnick, 2012). Thus, the current study compared the efficacy of MAP (engaging, focusing, evoking, planning) to Action Planning (AP) intervention. This study also examined the differences in student acceptability between the two interventions.

Definition of Key Terms

Multi-Tiered Systems of Support (MTSS). Multitiered Systems of Support (MTSS) is a service delivery model that focuses on data-based decision making as well as early prevention and intervention (Cook et al., 2015). There are at least three tiers in the model: universal level provides basic support to all students, targeted level provides additional support to students at-

risk academically or emotionally (15 to 20% of population), and intensive level provides substantial support to students with severe needs (approximately 5% of the population).

Students in accelerated curricula. In this study, students in accelerated curricula refer to high school students (specifically, freshmen) taking Advanced Placement classes or enrolled in a pre-International Baccalaureate program. Advanced Placement classes are rigorous, college-level courses offered to high school students to prepare them for college (College Board, 2017). International Baccalaureate is an international academic program offered to various age groups. This study focuses on the pre-IB Diploma Programme (IBDP), which is an internationally recognized college preparatory program offered to junior and senior in high school. Freshmen and sophomores are usually enrolled in the pre-IB program which is intended to lead to the IBDP.

Student success. Suldo, Gormley, DuPaul and Anderson-Butcher (2014) suggest that indicators of student success include academic and social-emotional functioning. A successful student thrives academically (e.g., earns good grades), socially (e.g., has good peer relationships), and emotionally (e.g., reports high subjective wellbeing). In this study, student success is defined by academic (GPA and Advanced Placement/International Baccalaureate course grade) and emotional (subjective wellbeing, academic burnout, symptoms of psychopathology) outcomes.

At-risk students in accelerated curricula. In this paper, at-risk students are defined as high school freshmen taking at least one Advanced Placement class (i.e., Human Geography) who exhibit signs of academic challenges (indicated by lower Fall semester GPA and/or Advanced Placement Human Geography course grade) and/or emotional difficulties (indicated by elevated perceived level of stress or low school satisfaction).

Action planning (AP). In general, action planning refers to intervention that involve participant stating (a) a goal, (b) when, where, and how they will carry out a plan to reach the goal, and (c) how will they address barriers to goal (Hagger & Luszczynska, 2014).

Motivational interviewing (MI). As given by Miller and Rollnick, "MI is a collaborative, goal-oriented style of communication with specific attention to the language of change. It is designed to strengthen personal motivation for and commitment to a specific goal by eliciting and exploring the person's own reasons for change within an atmosphere of acceptance and compassion" (p. 29).

Advancing Coping and Engagement (ACE). The Advancing Coping and Engagement (ACE) for AP and IB student success program is a 12-week universal curriculum under development (Shaunessy-Dedrick et al., 2018; Suldo, O'Brennan, Parker, Storey, Moseley, & Shum, 2017; Suldo, Parker, Shaunessy-Dedrick, & O'Brennan, 2019). The aim of ACE is to support students in accelerated curricula through teaching them coping and engagement skills related to student success in Advanced Placement or International Baccalaureate courses.

Motivation, Assessment, and Planning (MAP). Motivation, Assessment, and Planning (MAP) meetings are an individual MI-based selective intervention in development (O'Brennan et al., 2019; Suldo, Parker, Shaunessy-Dedrick, & O'Brennan, 2018; Suldo, Smith, Strait, Shum, Lee, & O'Brennan, 2018). The goal of MAP meetings are to help students who are at-risk for diminished emotional or academic success further develop coping and engagement skills from the ACE program.

Research Questions

This study aims to answer the following research questions:

1. Does participation in the Motivation, Assessment, and Planning (MAP) intervention result in better outcomes compared to participation in the Action Planning (AP) intervention among at-risk 9th grade students in accelerated curricula? Outcomes include:
    a. Importance of change
    b. Confidence to change
    c. Therapeutic alliance
    d. Goal attainment
2. Does participation in the Motivation, Assessment, and Planning (MAP) intervention results in better *acceptability* compared to participation in the Action Planning (AP) intervention among at-risk 9th grade students in accelerated curricula?

Hypotheses

Regarding research question 1, this researcher hypothesized that participants (i.e., at-risk 9th grade students in accelerated curricula) would demonstrate better outcomes after participating in the MAP compared to the AP intervention. Specifically, participants were anticipated to report significantly higher *perceived importance of and readiness to change*, *therapeutic alliance*, and *goal attainment* after the MAP intervention as compared to the AP intervention. These hypotheses were based on findings from previous studies included in the literature reviewed in Chapter 2. Although both MI-based and Action Planning (AP) interventions have been shown to be effective in helping individuals enact positive change (e.g., increase healthy behaviors) in clinical settings (Bélanger-Gravel et al., 2013; Lundahl & Burke, 2009), there are more instances

of empirical support for MI-based interventions in schools (Snape & Atkinson, 2016). In part because AP interventions are often used in conjunction with other interventions, its effects as a standalone intervention in schools remained unclear. On the other hand, 49 students from two high schools in one district participated in an initial implementation trial of MAP and, on average, indicated high readiness to change target behaviors after MAP meetings (Suldo, Shaunessy-Dedrick, O'Brennan, Parker et al., 2018). Secondly, the collaborative nature of MI might contribute to higher therapeutic alliance between coach and student (Kaplan, 2014). Finally, past research included in the literature review presented in Chapter 2 suggests that MI-based interventions are effective in motivating individuals to enact plans that align with their values and beliefs (Lundahl & Burke, 2009; Snape & Atkinson, 2016). Preliminary findings from students in the implementation trial of MAP meetings mentioned above also suggest that participants often report completing some or all steps of their change plan (O'Brennan et al., 2019).

Regarding research question 2, this researcher hypothesized that participants would rate the MAP intervention to be more *acceptable* than the AP intervention. Again, this hypothesis is rooted in the literature review included in Chapter 2. Specifically, MI has shown to be an appropriate counseling approach for adolescents due to its support for autonomy and collaborative nature (Kaplan, 2014). As participants in this study are high school students enrolled in accelerated courses, they might appreciate a collaborative atmosphere and a coach that support their autonomy, which could be stronger in the MAP meeting, which include engage and evoke processes.

Study Contributions to the Literature

To the best of this author's knowledge, there is no published study that compares the efficacy of a school-based MI intervention to an AP intervention among high school students enrolled in accelerated curricula. This is an important gap to fill as there is a need for targeted intervention designed specifically for this population of students who are traditionally underserved (Suldo, O'Brennan, Storey, & Shaunessy-Dedrick, 2018). Although these students appear to be doing relatively well in school due to their prior academic success, they tend to report higher level of perceived stress compared to general education students (Suldo & Shaunessy-Dedrick, 2013), which might negatively affect their academic and emotional functioning (Suldo et al. 2009). The current study's findings shed some light on how the MAP intervention (a targeted support developed for this group of students) affects students' readiness to use engagement and coping skills compared to an AP intervention. This is important as the engagement and coping skills targeted in this study have shown to correlate with the success of students in accelerated curricula (Suldo, Shaunessy-Dedrick, Ferron, & Dedrick, 2018). This study also added to the current literature on school-based student-focused MI interventions. Specifically, this study examined the efficacy of a school-based MI intervention with a new population (i.e., students in accelerated curricula) in relation to an AP intervention.

Chapter II: Review of the Literature

This chapter includes a review of relevant literature to establish the study's significance. The literature review begins by describing the Multi-Tiered Systems of Support (MTSS) for adolescent academic and emotional success. In this section, the review (a) introduces the comprehensive definition of student success, (b) highlights the need to prevent academic decline and emotional burnout through providing universal and early support, and (c) describes a range of targeted support for high school students. Next, the review presents popular counseling approaches in modern school mental health services, including a detailed description of one of the most popular support provided to students - teaching and practicing action planning (AP) skills. After that, the review focuses on describing an emerging counseling approach in school mental health services—Motivational Interviewing (MI). This chapter will then offer a comparison view between AP and MI. Next, this chapter explores a group of students who are traditionally underserved (students enrolled in accelerated curricula), pointing out the unique needs of this student population. Then, the literature review describes a comprehensive intervention in development to support students in accelerated curricula – the Advancing Coping and Engagement (ACE) for Advanced Placement and International Baccalaureate student success program, screening, and the Motivation, Assessment, and Planning (MAP) intervention. Finally, this review summarizes and identifies gaps in current literature, including a lack of targeted social-emotional support for high school students, especially those enrolled in accelerated courses. There are also minimal interventions that target stress management and

student engagement. This led a group of researchers to develop the ACE and MAP, but there is a need to further examine the efficacy of MAP based on school mental health providers' feedback.

Multi-Tiered System of Supports (MTSS) for Adolescent Academic and Emotional Success

According to Cook et al. (2015), Multi-Tiered Systems of Supports (MTSS) represents a service delivery framework that stemmed from the public health approach, which focuses on early prevention and intervention. The goal of MTSS is to utilize data-based decision-making to provide a continuum of evidence-based services that meet all students' academic and social-emotional needs. To achieve this goal, the MTSS does not stop at preventing and minimizing problems. In addition to addressing difficulties, the system strives to promote students' academic and social-emotional competencies to maximize their chances at succeeding in school.

Defining student success. Before this section continues, it is important to first define student success in a comprehensive manner. According to Suldo, Gormley, DuPaul, and Anderson-Butcher (2014), student success can be defined comprehensively through evaluating students' academic and social-emotional functioning.

Academic functioning. Doll, Spies, and Champion (2012) suggest that the field of education is moving away from focusing on dropout prevention to school completion, which indicates that educators are paying more attention to students' ability to engage in school activities, feel belonged, and be focused and interested in class (i.e., indicators that predict successful school completion). Suldo et al. (2014) further suggest that definition of academic success should include behavior and attitudes that serve as academic enablers, in addition to skills assessed by tests and course grades. It is notable that improvements in behavioral and affective engagement are related to removal of learning barriers, including negative student behaviors (e.g., not focusing in class) and attitude (e.g., dislike school); (Adelman & Taylor,

2000). Through improving student engagement, students gain more access to instruction, which ultimately helps them obtain the academic skills that schools are being evaluated on (e.g., passing statewide exams). In sum, academic functioning should constitute examining students' *academic skills* (i.e., knowledge in specific areas such as GPA), *behavioral engagement* (e.g., on-tasks behaviors in class), and *affective engagement* (e.g., feelings of connectedness to school).

Social-emotional functioning. Traditionally, psychological functioning is measured through levels of distress. Although the absence of distress (e.g., psychopathological symptoms) is desirable, the addition of the presence of subjective well-being is optimal and considered thriving (Suldo et al., 2014). Moreover, Roeser, Eccles, and Sameroff (2000) suggest that social-emotional outcomes should comprise of psychological and behavioral functioning. Thus, a comprehensive evaluation of social-emotional outcomes should include:

- *Symptoms of distress/psychopathology*: positive social-emotional functioning is reflected in low levels of internalizing (e.g., anxiety, depression) and externalizing (e.g., aggression) symptoms.
- *Indicators of subjective well-being*: positive social-emotional functioning is reflected in average to above average level of emotional well-being, which can be measured by student self-report of satisfaction with life or positive emotions such as happiness, interest, pride, and joy.
- *Indicators of behavioral functioning*: positive social-emotional functioning is indicated by high levels of social competence (e.g., social skills) and low levels of social problem (e.g., peer victimization).

As mentioned, it is important to consider positive indicators of mental health in addition to absence of psychopathology when evaluating students' social-emotional functioning. When

Suldo and Shaffer (2008) examined the subjective well-being (SWB), psychopathology, academic functioning, social adjustments, and physical health of 349 middle school students (6th to 8th grades), they found that students with positive indicators of mental health (i.e., higher level of SWB) and lower level of psychopathology demonstrated better academic outcomes (e.g., better reading skills), self-perceived physical health , and social functioning compare to peers with low level of SWB and psychopathology. Suldo and Shaffer (2008) consider this group of students who perceive self to have higher level of SWB and lower level of psychopathology as those with *complete mental health*. Sixty percent of students fall in the *complete mental health* group. Other students fall into the *vulnerable* group (i.e., low level of SWB and psychopathology; 12.5%), *symptomatic but content* group (i.e., elevated level of SWB and psychopathology; 12.5%), and *troubled* group (i.e., low level of SWB and high level of psychopathology; 15%). If schools use the absence of psychopathology as the only indicator of psychological functioning, students who fall in the *vulnerable* group will fall through the crack and might not receive the appropriate support to prevent future failure. In summary, a comprehensive definition of student success should include academic and social-emotional functioning (Suldo et al., 2014). This comprehensive definition acknowledges the invisible skills (e.g., academic enabling and social-emotional skills) that are required for students to succeed in school.

Universal support. The MTSS aims to promote student success that aligns with the description provided above. Christner, Mennuti, and Whitaker (2008) offer a more detailed description of the MTSS. Similar to Cook et al. (2015), they describe MTSS as a systematic approach to assess, intervene, and monitor students' progress towards academic and social-emotional success. Their model includes four levels of intervention, namely universal, targeted,

intensive, and crisis level. At the universal level, all students receive evidence-based supports to build protective factors that reduce vulnerability to future problems or maladaptive coping. Some examples of interventions at this level include teaching social-emotional skills, building resiliency, preventing bullying, and promoting adaptive coping strategies.

The universal level of support has been shown to prevent academic decline and emotional burnout. For example, Durlak, Weissberg, Dymnicki, Taylor, and Schellinger (2011) conducted a meta-analysis across 213 studies that examined the outcomes of school-based universal Social-Emotional Learning (SEL) programs found that students who participated in SEL programs demonstrated improved social and emotional skills, attitudes, behavior, and academic competence. Specifically, 68 studies demonstrated increased SEL skills such as identifying emotions from social cues, goal setting, perspective taking, interpersonal problem-solving, and decision making (ES = .57); 106 studies established increased attitudes towards self, school, and social topics such as drug use (ES = .23); 86 studies showed increased self-report or observed positive social behavior (ES = .24); 112 studies demonstrated improved conduct problems such as aggression, non-compliance, and bullying (ES = .22); and 49 studies showed improved in emotional distress such as depression, anxiety, stress, and social withdrawal (ES = .24). Although a minority of studies in this meta-analysis examined academic outcomes (35 studies with 135,396 participants), analysis yielded a significant increase in standardized reading or math achievement test scores (ES = .27) and overall Grade Point Average (GPA) in specific subjects such as Reading or Math (ES = .33). This meta-analysis suggests that universal school-based social-emotional support serve as an effective mean to prevent academic deterioration or emotional distress.

A total of 270,034 students from kindergarten to high school were involved in Durlak and colleagues' (2011) meta-analysis. Among that sample, 56% were elementary school students, 31% were middle school students, and 27% were high school students. This trend suggests that social-emotional support gradually declines as students move onto higher grades. This observation is concerning as students often experience more academic and social-emotional challenges during times of transition, especially from middle to high school (i.e., 9th grade). Cohen and Smerdon (2009) explained that many 9th grade students, even those who have done well in the past, struggle to succeed in high school due to a combination of developmental and contextual factors. Developmentally, 9th grade students move into adolescent years which constitute greater pubertal changes (e.g., hormonal changes exacerbate uncertainty of transition), bigger social stress (e.g., navigating through social cliques), and higher academic stress (e.g., increased academic workload). They also begin to develop their own identity while experiencing a change in social contexts (e.g., losing support network from middle school, negotiating autonomy from parents, relying more on peer support, etc.). These various factors contribute to increased social and emotional challenges among 9th grade students, which often result in negative outcomes such as achievement loss, poorer attendance, and decreased engagement (Alspaugh, 1998). Aligned with the concept of providing preventative, universal support, Cohen and Smerdon (2009) suggest providing early intervention and creating supportive environment to aid students through middle to high school transition.

As the universal level of support has been shown to be effective in supporting student success (i.e., prevent academic and social-emotional challenges as well as promote competence in those areas), it might be beneficial to implement universal social-emotional interventions during times of transition, especially during first year of high school, when students face

additional stress and challenges. To take it one step further, targeted supports should be provided in addition to universal support for high school students who demonstrate signs of academic or social-emotional risk. The following section describes existing targeted supports for high school students in the context of MTSS in the current literature.

Targeted support for high school students. According to Christner, Mennuti, and Whitaker (2008), the goal at this level is to provide additional supports to students who (a) did not respond to universal level of support, (b) are at risk for developing emotional or behavioral problems, and (c) have specific life stressors (e.g., poverty). Approximately 15-20% of students at a given school can be expected to be in need of this level of support. This level provides more intensive and specialized interventions that are appropriate for students who display ongoing needs that are not severe enough to warrant intensive supports. Educators can identify students who need this level of support through systematic screening and data-based decision making.

Bruhn, Lane, and Hirsch (2014) conducted a literature review to investigate the extent to which targeted supports have been implemented and evaluated within schools that utilize MTSS to provide academic and behavioral services. Out of the 28 studies that met the authors' criteria, only one study involved high school participants. In this descriptive, quasi-experimental study, Lane, Kalberg, Mofield, Wehby, and Parks (2009) investigated the effects of a targeted academic intervention (i.e., Preparing for the ACT) that aimed to help a group of students (N= 126; identified by the principal and schoolwide team) prepare for the American College Test (ACT). Comparing students who did (2005-2006 academic year) and did not (2004-2005 academic year) participate in the intervention, the authors found a 10% increase in number of students who meet the district target scores during intervention year. Moreover, school mean scores either met (Science and total score) or exceeded (English and Math) state mean scores during intervention

year. That is an improvement as the school mean score was below the state mean score on all subject areas in the previous year.

In terms of targeted supports within the MTSS framework that focus on social-emotional functioning, a review of the current literature shows that most studies focus on addressing or preventing internalizing (e.g., anxiety, depression) or externalizing (e.g., absenteeism, aggression) symptoms among students. For example, the COPE (Creating Opportunities for Personal Empowerment) Healthy Lifestyles TEEN (Thinking, Emotions, Exercise, Nutrition) program is a 15-session manualized curriculum that aims to improve high school students' lifestyle through a cognitive-behavioral lens. In a cluster randomized controlled trial conducted by Melnyk et al. (2015), 779 culturally diverse youth (age 14-16 years) from 11 high schools in 2 school districts in the US Southwestern region were randomly assigned to the COPE Healthy Lifestyle TEEN program or an attention control program called Healthy Teens (educate students on common health issues such as dental care, skin care, etc.). Each lesson includes a cognitive-behavioral component and a 20 minutes physical activity. Compared to the control group, a marginal model approach to repeated measures ANCOVA revealed that there is a significant decrease in the proportion of overweight and obese participants from baseline to 12 months (χ^2 = 5.40, p = .02). Moreover, participants who received COPE and had elevated depression scores at the beginning of the study showed significant decrease in depression scores (fell into normal range) at 12 months (M = 42.39). In contrast, participants in the control group and had elevated depression symptoms stayed in the depressed range after 12 months (M = 57.90; $F_{1, 12}$ = 5.78, p = .03). The COPE program is an example of curriculum that can be used at the universal (all students) or targeted (subgroup of students) level. Its focus on teaching students coping strategies to improve lifestyle aligns with the MTSS framework of prevention and early intervention.

Another example of an evidence-based targeted mental health support for youth is the Modular Approach to Therapy for Children with Anxiety, Depression, Trauma, or Conduct Problems (MATCH-ADTC; Chorpita & Weisz, 2009). With a modular design, MATCH-ADTC (Chorpita & Weisz, 2009) act as an organized system that allows clinician to flexibly draw on 33 procedures adapted from evidence-based treatments to address youth's anxiety, depression, trauma, and/or conduct problems. Weisz et al. (2012) conducted a randomized trial with 174 clinically referred youth (age 7 to 13) from 2005 to 2009. Participants were randomly assigned to 1 of 3 conditions. Participants assigned to usual care condition used the treatment procedures that they used regularly; participants in standard treatment received one of the manualized protocols (i.e., Coping Cat, Primary and Secondary Control Enhancement Training, and Defiant Children); participants assigned to modular treatment received MATCH-ADTC. Mixed effects regression analyses revealed that participants who had modular treatment showed significantly steeper trajectories of improvement compared to usual care and standard treatment.

It is noteworthy that the MATCH-ADTC (Chorpita & Weisz, 2009) can be utilized at the intensive level with individual students who need extensive support beyond universal and targeted level of services. Similar to how evidence-based targeted support programs are sometimes used at the intensive level, practitioners often utilize evidence-based universal support programs at the targeted level. For example, practitioners may deliver a social-emotional curriculum (e.g., COPE program) to a subgroup of students whom they perceived to need targeted support in that area. In summary, targeted support is defined as providing support tailored to the needs of a specific group of students, individually or in small groups. The program or curriculum used can be adapted from a universal or intensive program.

This review of the literature revealed few targeted supports for high school students within the MTSS framework. Just as Durlak et al.'s (2013) meta-analysis of 213 studies that examined the efficacy of universal social-emotional support found that the amount of studies that involved high school students were the least, Hoagwood et al. (2007) reviewed over 2,000 published articles between 1990 and 2006 and reported that most of the interventions focused on elementary students. This points to a gap in the current literature; there is a need to examine how to best support high school students academically, socially, and emotionally. Moreover, many targeted supports (e.g., Preparing for the ACT and MATCH-ADTC) adopt the deficit model, where the goal is to fix an existing symptom (e.g., academic decline, internalizing symptoms, etc.). In the spirit of the MTSS, the field of education is shifting towards a prevention model. One way to prevent problems before they occur may be through teaching high school students stress management and school engagement skills. Stress management skills can help students cope with various demands associated with being a high school student (e.g., increase in academic load, change in social circle); whereas school engagement skills can aid adolescents in feeling more connected to others at school, which is a protective factor. Although some programs like COPE teaches students coping skills, it does not explicitly teach skills that enable adolescents to connect to their school, teachers, and peers (i.e., engagement skills). A curriculum that combine both seems to be another gap in the literature.

Counseling Approaches in School Mental Health Services

According to a longitudinal community study conducted by Costello, Mustillo, Erkanli, Keeler, and Angold (2003), 36.7% of youth age 9 to 16 (N = 1420) met criteria for at least one psychiatric disorder over the study period (participants were assessed for psychiatric disorder every year since intake until age 16). The National Comorbidity Survey-Adolescence

Supplement (NCS-A) provide more insight on the prevalence of disorders through interviewing a sample of more than 10,000 youth age 13 to 18. The study results showed that a high rate of mental disorders persist in U.S. youth; the most common is anxiety disorder (31.9% of youth), followed by behavior disorders (19.1%), mood disorders (14.3%) and substance abuse (11.4%; Merikangas et al., 2010). The NCS-A also revealed that only about 36% of youth who meet criteria for a mental disorder receive any kind of services. Moreover, three out of four of youth receiving mental health support receive such in a school setting.

School mental health providers utilize various counseling approaches to address students' mental health needs. Hanchon and Fernald (2013) conducted an internet survey with 771 school psychologists across the nation and found that the most popular counseling approach among the participants who were providing school-based counseling services (n = 401; 58% out of 771 respondents) is the *cognitive-behavioral* model (n = 332; 88.2% out of 401 respondents). Table 1 lists all the counseling orientations that participants identified with in the order of most to least common.

Table 1

Approaches Used by Respondents in Hanchon and Fernald's (2013) Study

Counseling Approach	*n*	% of Respondents
Cognitive-Behavioral	335	88.2
Brief Solution-Focused	295	77.6
Behavioral	261	68.7
Reality-Based	157	41.3
Social-Cognitive	156	41.1
Family Systems	119	31.3
Humanistic	115	30.3
Psychoanalytic	70	18.4

Cognitive-behavioral therapy focuses on changing maladaptive thoughts among clients, believing that doing so changes one's emotions and behaviors in response to events. Action

planning, problem-solving, self-evaluation, and positive self-talk are common techniques in cognitive-behavioral therapy (Kendall, 1985; Kendall, 2011). There are several reasons why the cognitive-behavioral model, with an emphasis on action planning, is the most popular model among school psychologists who provide school-based counseling services (Hanchon & Fernald, 2013). Raffaele-Mendez (2016) explained that the cognitive-behavioral model is appropriate for school-based mental health services because it is evidence-based, flexible to be delivered in small group or individualized modalities, and can be delivered in a non-manualized but structured format, allowing the student and therapist to work together to create agenda that relates to the topics that are important to the student. Case in point, the interventions in MATCH-ADTC (Chorpita & Weisz, 2009), an evidence-based targeted support program describe above, are rooted in the cognitive-behavioral framework.

The second most popular approach is the *brief solution-focused* therapy, a strengths-based intervention that encourages clients to generate solutions to solve their own problems. Using carefully posed questions, the approach aims to help client make changes with their own resources and motivation. Kim and Franklin (2009) conducted a meta-analysis on studies that examine the effects of solution-focused therapy in school settings. From 1998 to 2007, only 7 studies met the inclusion criteria. They found mixed results on the efficacy of this approach. Some studies demonstrated decrease in intensity of negative emotions, increase in ability to manage problems, improved academic outcomes (e.g., credits earned), and improvement in externalizing symptoms and substance use. One study also revealed that the solution-focused therapy is as effective as cognitive-behavioral therapy and result in better retention rate and higher engagement with client. On the other hand, some studies suggested that this approach is

not effective in raising Grade Point Average (GPA), improving attendance, or increasing students' level of self-esteem.

An approach that shares some features with brief solution-focused is *Motivational Interviewing (MI)*. Both styles are collaborative in nature, aim to cultivate clients' resources and motivation, and are antitheses of problem-focused therapies (Lewis & Osborn, 2004). Although there are some similarities between the two approaches, there are some key differences that distinguish them. One such difference is that MI uses a well-defined model of change – the stages of change model (Prochaska, 1999); whereas brief solution-focused therapy believes that resistance does not exist and does not endorse a clear model of change (Lewis & Osborn, 2004). Moreover, brief solution-focused therapy uses reflective practices to reach mutual client-counselor reflection; whereas MI focuses on using reflection to communicate empathy and guide client to move towards change. More details on MI will be provided after this section, but it is important to not equate brief solution-focused therapy with MI.

The *behavioral approach* is the third most common approach adopted by respondents in Hanchon and Fernald's (2003) study. As overt behavioral difficulties are the most common referral issue (94.5%) reported by the participants, it is easy to see why the behavioral approach is popular. Behavioral approach can stem from a wide array of theories (e.g., applied behavior analysis, social learning theory, etc.) and each model hold different assumptions about cause and maintenance of problematic behaviors (Gresham, 2004). However, it is noteworthy almost all of the behavioral interventions in schools involve the action planning process (Sugai & Horner, 2002). School practitioners often utilize one or more of these models in addressing behavioral difficulties in school. A long line of research supports the efficacy of behavioral interventions. For example, Kratochwill and Stoiber's (2000) meta-analysis of over 300 studies that involve

youth age 2 to 18 years old and reported an average effect size between .70 and .90 for behavioral interventions. As the percentage of school psychologists in Hanchon and Fernald's (2003) study who identify with the rest of the approaches drastically decrease after the three most popular approach (i.e., cognitive-behavioral, brief solution-focused, and behavioral), this literature review will not describe the details of the remaining approaches.

In addition to the approaches emerged from Hanchon and Fernald's study, a new wave of psychotherapy approaches has emerged. Acceptance and Commitment Therapy (ACT), Dialectical Behavior Therapy (DBT), and Positive Psychology Intervention (PPI) are some examples of the new wave of psychotherapy. A common element across ACT, DBT, and PPI is *mindfulness*. These psychotherapies have gained popularity in school-based mental health services in part because of their ability to simultaneously address problems and cultivate subjective wellbeing among students. For example, Mind Up (Schonert-Reichl et al., 2015), an evidence-based universal program designed to teach youth from pre-Kindergarten to 8th grade about neuroscience (e.g., focused attention), mindful awareness (e.g., mindful listening), positive psychology (e.g., savoring), and social-emotional learning (e.g., act with kindness) has been shown to improve students' (a) cognitive control and stress physiology, (b) empathy, perspective-taking, emotional control, optimism, school pride, and mindfulness, (c) self-reported symptoms of depression and peer-rated aggression, and (d) popularity among peers (Schonert-Reichl et al., 2015).

Another emerging school counseling approach is the *Strengths-Based School Counseling (SBSC)* framework. Galassi (2017) explained that this approach aims to promote and advocate for positive development among all students, in contrast to the traditional model that only focuses on a subgroup of students (e.g., students with exceptional needs). This framework is

rooted in evidence-based interventions that focuses on positive youth development (e.g., building resiliency, foster self-efficacy, promote hope, etc.). The six guiding principles of SBSC are (a) promote context-based development for all students, (b) promote individual student strengths, (c) promote strengths-enhancing environment, (d) emphasize strengths promotion over problem reduction and problem prevention, (e) emphasize evidence-based interventions and practice, and (f) emphasize promotion-oriented developmental advocacy at the school level. This framework encourages school mental health providers to endorse both direct (e.g., counseling) and systemic (e.g., consultation) services to maximize the effectiveness of service delivery.

In line with the MTSS framework described before this section, the provision of school mental health services should be proactive and strive to prevent problems before they occur. Moreover, if complete mental health is the goal, it is equally important to reduce signs of problems (e.g., psychopathology symptoms) as it is to promote subjective wellbeing among students. Hanchon and Fernald's (2013) study revealed that the majority of school psychologists nationwide who are providing mental health services seem to identify with the more traditional counseling approaches such as the cognitive-behavioral model, where the focus tends to be reducing psychological distress. The new theories of psychotherapy (e.g., mindfulness and positive psychology) address this gap by providing a mean to promote subjective wellbeing among youth in school. Depending on how school-based mental health practitioners utilize the counseling approach (traditional or new wave) in their own practice, each approach can contribute to fostering complete mental health among students. In fact, practitioners should match the school's or students' needs to the appropriate counseling approach. Often, practitioners utilize more than one counseling approach to meet the various needs in school.

There are two additional interventions that have yet to be discussed in detail in this chapter – action planning and motivational interviewing—that are relevant to promoting complete mental health. These interventions are important to discuss as they have the potential to reduce early psychopathological symptoms and promote subjective wellbeing among students. Feasibility and acceptability are relatively high because they are brief, targeted interventions that promote student behavior change to achieve a goal. The goal can either reduce distress or promote subjective wellbeing. The flexibility of these interventions can be valuable to fit the ever-changing needs of youth.

Action planning (AP). Action planning (AP) is an intervention technique rooted in health behavior research and driven by social-cognitive theories. As mentioned, it is one of the most important elements in two of the most popular counseling approaches utilized by school psychologist – Cognitive Behavioral and Behavioral Therapy (Hanchon & Fernald, 2013). In the social-cognitive model, intention is conceptualized as the primary determinant of whether one perform and maintain health behavior (Hagger & Luszczynska, 2014). However, there is often an intention-behavior gap, where the intention to perform a behavior does not translate into actual behavior. AP, along with other planning interventions are techniques designed to close this gap through strengthening one's intention and creating solid plans to help individuals enact the intended behavior. This review focuses on AP as it is one of the most used planning strategies in the current literature (Bélanger-Gravel, Godin, & Amireault, 2013) and it is widely used by school psychologists as an intervention (Hanchon & Fernald, 2013).

Generally, AP entails cue-response contingency, which means that the client specifies *when* (time-related cues) and *where* (external environment cues) they will carry out their plan (Hagger & Luszczynska, 2014). Moreover, client will detail *how* he or she will perform the

behavior. The action can be simple (e.g., studying) or relatively complex (e.g., review class content for 45 minutes). Lastly, AP is always tied to a goal (e.g., get better grades). In addition to specifying when, where, and how one would carry out a behavior, action planning is sometimes accompanied by a *coping plan* (i.e., anticipate barriers and generate solutions to address them) to further narrow the intention-behavior gap. The coping plan often involves some kind of problem-solving process to anticipate and address obstacles to plan enactment.

Action planning (AP) has been found to be effective in increasing health behaviors. A meta-analysis on the efficacy of AP intervention on physical activity (e.g., going to the gym) across 26 randomized controlled trials involving college students, clinical samples, and adults (age ranges from 18 to 64 years) reported small to medium overall effect size of 0.31 (95% CI [0.11, 0.51]) at post-intervention; 0.24 (95% CI [0.13, 0.35]) at follow-up (Bélanger-Gravel et al., 2013). Most of the studies used self-report measures (e.g., questionnaire, diaries, checklist) except for two (one used direct observation; another used pedometer).

School-based application of action planning. In the realm of school-based interventions, action planning (AP) is often embedded as part of a counseling or intervention program, especially when the practitioner is using the Cognitive-Behavioral or Behavioral approach (Hanchon & Fernald, 2013). In addition to specifying when, where, and how students will carry out a plan, AP in the schools often involve problem-solving. Specifically, interventionists often help student problem-solves barriers to carrying out the action plan. For example, a school mental health provider may work with student to create an action plan at the end of counseling session to encourage student to carry out behaviors that will lead them to achieve their therapy goals. It is viewed as an accountability system that increase the probability that student perform desired change in behavior. Sometimes, AP is embedded in an intervention curriculum, such as

the Homework, Organization, and Planning Skills (HOPS) Intervention (Langberg, 2011). HOPS is a 16-session behavioral intervention that aim to teach students how to organize school materials, record and manage homework, as well as planning out their time. AP occurs when HOPS teaches students how to plan for the timely completion of school assignments. In a randomized controlled trial carried out by Langberg, Epstein, Becker, Girio-Herrera and Vaughn (2012), 47 middle school students (6^{th} to 8^{th} grade) with Attention-Deficit/Hyperactivity Disorder (ADHD) were randomly assigned to receive the HOPS intervention or to a waitlist control group. Compared to the control group, repeated measures multivariate analyses of variance (MANOVAs) revealed that those who participated in HOPS demonstrated significant improvements in parent-report organized action (d = .88), materials management (d = .63), planning (d = 1.05), and homework completion behaviors (d = .85). In summary, school-based mental health providers have been successfully utilizing AP to encourage behavior change among students (e.g., when embedded in HOPS, CBT, or other behavioral interventions) in schools.

Motivational interviewing. Miller and Rollnick (2012), leaders in the field of MI, described MI as follows:

> MI is a collaborative, goal-oriented style of communication with specific attention to the language of change. It is designed to strengthen personal motivation for and commitment to a specific goal by eliciting and exploring the person's own reasons for change within an atmosphere of acceptance and compassion (p. 29).

To further expand on that definition, MI is grounded in the person-centered approach, where client's autonomy is emphasized and respected. The spirit of MI constitutes partnership, acceptance, compassion, and evocation. In the spirit of *partnership*, MI coaches acknowledge

that clients know themselves best and the process of change require collaboration between coach and client. MI coaches also uphold an attitude of profound *acceptance*, that is to provide unconditional positive regard, accurate empathy, autonomy support, and affirmation to clients. Furthermore, MI coaches express *compassion* through prioritizing client's need and wellbeing above self. Finally, MI coaches embrace a strength-focused approach, believe that clients possess what they need to change within them, and that the role of a MI coach is to *evoke*, to call forth clients' motivation and resources for change. This approach differs from the traditional psychotherapy models that focus on client deficits.

While the underlying spirit of MI (i.e., partnership, acceptance, compassion, and evocation) help coaches get into the appropriate mindset before practicing MI, the four processes of MI (i.e., engaging, focusing, evoking, planning) guide coaches through the process of conducting MI (Miller & Rollnick, 2012). The four processes are both sequential and recursive, thus best represented by stair steps. Each process relies on the previous process as a foundation, but one may step up or down to revisit a previous process that needs renewed attention. Figure 1 represent the four processes in stair steps. *Engaging* is the first step in MI and serve as the foundation of the whole intervention as building a positive therapeutic relationship with client is a prerequisite for all the other processes. The second step entail coaches guiding client to *focus* on an agenda. Coaches strive to guide the conversation towards one or more change goals. Next, coaches lead client into the heart of MI – *evoke*. This process occurs when client is focused on a goal and the coach cultivate ideas and motivation within client to result in client-generated reasons for change. After evoking, if a client reaches a threshold of readiness, he or she will shift from talking about *whether* or *why* to change to *how* and *when* he or she can change. At this point, MI coaches should engage in *planning* with client – developing client's commitment to

change and collaboratively devising a plan of action. Completing the four processes does not necessary mean that the intervention has concluded. Miller and Rollnick (2012) stress that the four processes of MI may need to be revisit from time to time. For example, MI coaches often have to re-engage client during conversation or revise the action plan if the client encounters roadblocks while enacting the plan. In summary, MI coaches often step up and down the stairs of the four processes to meet the client's position in stages of change.

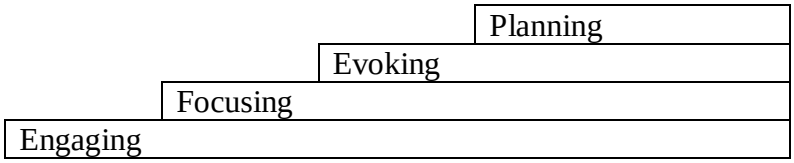

Figure 1. The Four Processes of Motivational Interviewing (MI)

In addition to the spirit and processes of MI, MI is associated with core skills– ask Open questions, Affirmation, Reflection, and Summary (OARS). These skills serve as tools that allow coaches to embody the spirit of MI and move between the four processes (Miller & Rollnick, 2012). In other words, it is *how* coaches carry out MI. *Open questions* invite clients to reflect and elaborate. It helps coaches understand clients and enhance collaboration between coach and client. *Affirmation* allows coaches to communicate what they noticed about the clients' strengths to the clients. This is an important practice in MI as it relies on clients' personal resources to enable change. It is the coaches' role to help clients believe in and harness their own ability to change. *Reflective listening* keeps clients talking, exploring, pondering on what they said to the coaches. It also helps coaches further understand what the clients are trying to convey. Finally, *summarizing* enables coaches to provide a collection of reflections on what the clients had said in the conversation. It can serve as a way to link various topics together or to transition from one process to another. Miller and Rollnick (2012) explained that the four skills overlap. A summary is a long reflection, some reflections can also be categorized as affirmations, and good reflective

listening is needed to perform all four skills. In essence, MI is a fairly complicated intervention. The four spirit, processes, and core skills intertwine to create a counseling approach that is truly unique with the goal of eliciting behavior change.

MI has gained much attention over the last three decades (Lundahl & Burke, 2009). From 1980 to 1989, there were only six references on MI in PsycInfo. The number grew to 78 between 1990 to 1999 and to 707 between 2000 and 2009. In terms of efficacy, various meta-analyses have shown MI to be effective in helping individuals overcome a wide array of problems such as substance use and risky behaviors. Burke, Arkowitz, and Menchola (2003) published a meta-analysis on MI that included 30 controlled clinical trials. The trials delivered MI individually to treat problem behaviors such as drinking, substance abuse, risky sexual behaviors, diet, and exercise. In 2005, Hettema, Steele, and Miller (2005) published another meta-analysis on MI which included 72 studies, but some of the studies combined MI with another counseling approach such as Cognitive-Behavioral Therapy (CBT). Later, Vasilaki, Hosier, and Cox (2006) published another MI meta-analysis that involved 15 studies that focused on reducing drinking problem. Lundahl and Burke (2009) compared the above-mentioned published meta-analyses of MI to their own meta-analysis (included 119 studies on MI that target a range of problems; Lundahl, Kunz, Brownell, Tollefson, & Burke, 2010) to examine the research evidence for MI's effectiveness. To systematically compare the studies, they used effect sizes and difference in success rate (i.e., percentage of gain relative to comparison group).

In general, Lundahl and Burke (2009) found that MI was consistently and significantly more effective when compared to waitlist or no treatment group. The effect size is significant but small (d = 0.28 – 0.40). Moreover, 14 to 19% of those who received MI tended to do better than the control group after two or three sessions of MI. When compared to another active treatment

(e.g., CBT), MI is usually as effective as the other treatment, but there are some instances when MI outperformed the other treatment (d = 0.04 – 0.32). Approximately 2 to 15% of the participants who received MI fared better than those who received another treatment, but some of these results are non-significant. This finding is consistent with the Dodo bird verdict, which states that psychotherapies share common factors that lead to small and non-significant differences between outcomes generated from different forms of psychotherapies (Luborsky, Singer, & Luborsky, 1975). In terms of types of problems, Lundahl and Burke (2009) reported that MI is most used to treat alcohol use problem and has shown to be more effective compared to no treatment/waitlist control; at least as effective as other active treatments. The other problems targeted in the four meta-analyses include marijuana use, tobacco use, all other drug use, risky behavior, increase healthy behavior, diet/exercise, social functioning, treatment compliance, increase motivation, gambling, eating disorder, emotional wellbeing, parenting practices, and confidence to change. Lundahl and Burke (2009) also found that MI is less effective when delivered in a small group modality and require less delivery time compared to other established treatments. In summary, MI seems to be a cost-effective treatment that can be used to address a wide range of problem behaviors and there is most empirical support for positive effects when delivered individually.

School-based application of motivational interviewing. Since the 1980s, researchers had adapted the MI approach in other settings, including school. MI is especially appropriate to use with adolescents as its respect for autonomy and collaborative nature aligns well with their need for independence and identity formation (Kaplan, 2014). Case in point, some of the meta-analyses described above involved adolescents and had been shown to be effective. Nonetheless, the literature on adolescents is still at an early stage compared to the literature on adults

Currently, MI is utilized in two ways in the schools – *student-focused* (directly conduct MI interventions with youth) and *consultative-focused* (use MI to consult with educators and parents; Strait, McQuillin, Terry, & Smith, 2014). For student-focused MI, a meta-analysis was recently conducted to examine its efficacy (Snape & Atkinson, 2016). In their literature search, they only included peer-reviewed studies conducted with youth (age 5 - 21), took place in an educational setting, used a MI-based intervention, empirical, and written in English. Only 8 studies (4 conducted in United States; 4 conducted in United Kingdom) met the inclusion criteria. Among the eight studies, some are case studies that involve only one student, others are randomized controlled trials that included higher number of students (highest $N = 135$). It is also noteworthy that a range of school professionals carried out the MI intervention, including school psychology interns and graduate students. In general, the current school-based student-focused MI interventions were primarily developed for the students who are only taking general education classes or students with disabilities to improve their academic outcomes (e.g., grades), behavior engagement (e.g., classroom participation, homework completion, and attendance), emotional engagement (e.g., attitude towards school), and vocational development. Students in accelerated curricula, who theoretically are great candidates to use MI with as they might be better able to handle the cognitive and neuropsychological demands of the MI process, have yet to be included in published studies. Nonetheless, combining all 8 studies in the meta-analysis, Snape and Atkinson (2016) concluded that there is an overall evidence for the efficacy of student-focused MI interventions. They also noted that some studies demonstrated positive outcomes with just one session of MI, suggesting that student-focused MI has the potential to be a cost-effective intervention. Table 2 describes each study included in the meta-analysis.

In addition to serving students directly, MI can also be used to strengthen consultative practices in schools (i.e., consultative-focused MI). The field of education has come to realize the importance of influencing parent and teacher behavior as it ultimately contributes to better student outcome. An example of the adaptation of MI to facilitate behavior change in parents is the Family Check Up (FCU) intervention. Through three sessions (i.e., intake interview, ecological assessment of family functioning, and performance-feedback) delivered by clinician in schools, FCU aims to increase parents' use of positive behavior support at home. As for teacher consultation, Lee, Frey, Herman, and Reinke (2014) provided some suggestions on how MI can be used to coach teachers to improve their own practices. Specifically, it can be used to motivate teachers to adhere to intervention fidelity, which in turn increase the likelihood of successful intervention. They recommended four activities based on the processes of MI – engaging, focusing, evoking, and planning. First, the coach should build a working alliance with teacher. Then, coach work with teacher to assess current practices, share performance feedback, and offer additional support to reach self-determined goal. There is also a more structured guide for MI-based teacher consultation – the Motivational Interviewing Navigation Guide (MING; Frey et al., 2013). MING consists of five steps that aim to evoke motivation within teachers to implement intervention with fidelity. Similar to student-focused school-based MI intervention, this field is relatively new but has great potential to improve student outcomes.

Although MI has much less evidence in its efficacy in school-based application compared to the health field, it has shown much promise. Returning to Lundahl and Burke's (2009) analysis of the efficacy of MI across four meta-analyses, they recommend and encourage others to adapt MI to new areas as their analyses revealed that MI is likely to be more effective than no treatment and it fare as well as other established treatment, probably in less time. Snape and

Atkinson's (2016) meta-analysis on current school-based student-focused MI interventions confirmed this sentiment. In a setting like school, time is a valuable and limited resource. MI may prove to be an excellent fit as past research lends confidence that it can support more students with relatively few contacts.

Since that meta-analysis, other school-based studies have provided support for positive impacts on other areas such as attitude towards school (Strait et al., 2017), sleep problems (Bonnar et al., 2015), and school dropout (Iachini, Rogelberg, Terry, & Lutz, 2016). Through a randomized controlled trial, Strait et al. (2017) reported that a brief school-based Motivational Interviewing (MI) intervention called the Student Check-Up (SCU) was effective in increasing middle school students' perceived importance of in-class participation and academic self-efficacy. On the other hand, Bonnar et al. (2015) found that a school-based motivational sleep education programs (SEPs) delivered with adjunct bright light therapy (BLT) and/or parental involvement (PI) was effective in increasing high school students' motivation to regularize bedtimes and avoid sleeping-in on weekends. Interestingly, MI was embedded in the class wide SEPs instead of delivered to individuals or in groups. Finally, Iachini, Rogelberg, Terry, and Lutz (2016) reported that Aspire, a MI-based early intervention program was feasible, acceptable, and effective in preventing students who are repeating 9th grade from dropping out of high school.

Comparing action planning to motivational interviewing. Compared to action planning (AP), Motivational Interviewing (MI) offers additional elements (e.g., engaging with client, cultivating clients' own motivation to change, conveying acceptance and collaboration, focusing on topics important to client, and evoking change talk) that serve to build up motivation in clients before and while making a change plan. Nonetheless, both AP and MI have been

Table 2

Study Characteristics from Snape and Atkinson's (2016) Meta-analysis of School-Based MI Interventions

Author (Year)	Sample	Study Design	Intervention	Interventionist	Outcome(s)
Atkinson & Woods (2003)	1 Female; 9th grade	CS	Five weekly 1-hour MI sessions + other consultative techniques	School Psychology Intern	• Teacher reported increase in attendance and punctuality, attitude towards school, and confidence • Slightly higher score on Myself as a Learner Scale (MALS; Burden, 1998) • Increase in Pupils Feelings about School and School Work (PFSSW) Inventory (Entwistle & Kozeki, 1985)
Atkinson & Amesu (2007)	1 Male; 6th grade	CS	Unspecified number of MI + SFBT sessions	Social Worker Manager	• Increased attendance • Teacher report improved behavior in class
Kittles & Atkinson (2009)	3 students (age 13-15)	CS	One individual MI session + Two optional additional sessions	School Psychology Intern	• Qualitative feedback from students were positive; 2 out of 3 students expressed positive views about the sessions • Facilitators view MI as a useful tool for assessment purposes as it provided a broad range of information

Table 2 (Continued)

					about student that can be used to personalize intervention
Enea & Dafinouni (2009)	38 students (age 16-17)	QE	Eight 1-hour MI sessions; Waitlist control	School Psychologist	• Students who received MI showed significant decrease in truancy rates; no difference in control group
Strait et al. (2012)	103 students (6^{th} to 8^{th} grades)	RCT	One MI session (45 minutes) with structured protocol; Include normative feedback and a goal sheet; Waitlist control	Trained School or Clinical Psychology graduate students	• Students who participated in MI showed significant improvements in math scores compared to control, but *not* in reading and language arts or science. • MI condition group demonstrated significant improvements in class participation and overall academic behavior, but *not* on homework completion or academic self-efficacy
Terry et al. (2013)	49 students (6^{th} to 8^{th} grades)	RCT	Used Strait et al.'s (2012) MI intervention; Waitlist Control	Graduate Clinical Community doctoral student; Bachelor-level research specialist	• MI group showed significant improvements in Math • No significant effect size for overall academic behavior, homework completion, and participation

Table 2 (Continued)

Channon et al. (2013)	Approximately 480 students participated in the peer support program across 4 years (6th and 8th grade)	CS	8th grade students get trained in a MI-based peer support program to support 6th grade students	8th grade students	• Qualitative analyses of individual interviews and focus groups showed that both adults and students view the program as beneficial and fit well with the school's vision and mission • Participants viewed the program as feasible and acceptable
Terry et al. (2014)	42 students (6th to 8th grades)	RCT	Participants randomly assigned to 1 or 2 sessions of MI (45 minutes; Strait et al., 2012 protocol); those who participate in 2nd session received performance feedback	Graduate Clinical Community doctoral student; Bachelor-level research specialist	• Participants who received 2 sessions of MI showed significantly higher grades in math, science, and history, but *not* on English Language Arts • Compared to 1 session, 2 sessions of MI resulted in significantly more improvement in affective engagement, but *not* on self-efficacy, life satisfaction, and behavioral engagement

Note. CS = Case Study, QE = Quasi-Experimental, RCT = Randomized Controlled Trial

shown to be effective in increasing healthy behaviors among adults. In terms of school-based applications, it seems like AP is most commonly embedded in school-based mental health services, such as during Cognitive-Behavioral or Behavioral interventions, which has been shown to be generally effective in schools (Kendall, 2011; Kratochwill & Stoiber, 2000). On the other hand, research on the effects of school-based MI interventions has also shown promising results (Snape & Atkinson, 2016). To the best of the author's knowledge, there is no study that compares the efficacy of AP to MI in helping students change their behaviors to meet a goal. This is a gap in the current literature that needs to be filled as practitioners need more information to make an informed decision on which approach to adopt in their own practices.

Considerations for Using Motivational Interviewing with Students in Accelerated Curricula

In the current study, students in accelerated curricula refer to those who are taking Advanced Placement classes or enrolled in a pre-International Baccalaureate program. Although such accelerated courses are often used to meet the needs of gifted students in high school (Hertberg-Davis & Callahan, 2008), this group of students includes both gifted and non-gifted youth. Even though not every student who enrolled in accelerated curricula is gifted, they form a high-achieving group. Suldo and Shaunessy-Dedrick (2013) investigated the differences between students in accelerated curricula and those in general education across 480 students (9^{th} to 12^{th} grades) from four high schools and found that the former group demonstrated excellent academic achievement (i.e., higher grades and GPA) and in-school conduct (i.e., good attendance and minimal behavior concerns), even after controlling for demographic and personality factors. In terms of long-term outcomes, Warne, Larsen, Anderson and Odasso (2015) reported that among 90,044 students across two high schools in Utah who took Advanced Placement classes, those

who completed the course and passed the Advanced Placement exams tend to obtain higher ACT scores. This is true even after controlling for academic, socioeconomic, and demographic variables. Moreover, Patterson, Packman, and Kobrun (2011) found that students who passed the Advanced Placement exam on the introductory course for their field major in college tend to acquire higher college GPAs. Even mere participation in accelerated courses has been shown to increase one's likelihood to attend higher education. Compared to students who did not take Advanced Placement exams, students who took Advanced Placement exams had a higher tendency to attend college (Chajewski, Mattern, & Shaw, 2011). As for students who completed the IB Diploma Programme (DP), they are highly likely to enroll in and complete studies at postsecondary institutions (Bergeron, 2015). Specifically, 92% of IBDP students who graduated from high school in 2008 enrolled in US postsecondary institutions between 2008 and 2014; 79% of this group of students graduated within 4 years.

Advanced Placement. The College Board created the Advanced Placement program in 1955 to allow high-achieving students to earn college credits in high school. From 1955 to 1956, only 104 schools offer Advanced Placement classes and approximately 1,200 students took Advanced Placement exams. Currently, more than 22,000 schools offer up to 37 Advanced Placement courses ranging from Biology to Human Geography and more than 2.5 million students take Advanced Placement tests each year (College Board, 2017). Usually, students choose to enroll in Advanced Placement courses based on their high school's availability. Some schools may set a limit on how many Advanced Placement courses students can take in their earlier years in high school. It is noteworthy that students are allowed to take the Advanced Placement exam even if they did not enroll in the Advanced Placement course at school. Out of a score from 1 to 5, a score of 3 or above constitute a passing score on the Advanced Placement

exam. Although passing an Advanced Placement test usually earn student some college credits at their future university, the ultimate decision of whether to award credits for passing Advanced Placement tests rest in the hand of the college/university. This is a huge incentive for taking Advanced Placement courses in high school as it helps students save tuition cost in the long run. Other factors that contribute to Advanced Placement classes' popularity over the years include generous government support (Many states provide subsidies on Advanced Placement test fee for students from low-income families; Dounay, 2007), ample availability to train teachers to teach Advanced Placement courses, and increased recommendations from educators (Hertberg-Davis & Callahan, 2008).

International Baccalaureate. The International Baccalaureate (IB) Diploma Programme (DP) was first introduced to the United States in the 1970s. Since then, there are 945 schools in the United States that offer this program and 1661 universities that established policies for admitting IB students (IBO, 2018b). The IBDP is usually offered to junior and senior high school students, but many schools in the United States offer freshmen and sophomores opportunities to take some courses that lead into the IBDP (Suldo, Shaunessy-Dedrick, & Hardesty, 2008). These freshmen and sophomores are enrolled in the pre-IB program. Alternatively, students can enroll in the Middle Years Program (MYP). The focus of IB program include cultivating students' metacognitive thinking, cultural competence, and encouraging community services. In addition to an end-of-course exam, students enrolled in IBDP are expected to complete an extended essay, learn critical thinking skills, participate in extracurricular activities that harness creativity, provide service to the community, and complete all required courses (IBO, 2018a). Similar to the AP courses, students can use their IB Diploma to receive college credits if the college policies allow.

Unique needs of students in accelerated curricula. As students in accelerated courses tend to demonstrate high academic achievement and good classroom conduct, they are often misunderstood as students who do not need additional support. Contrary to popular beliefs, Suldo and Shaunessy-Dedrick (2013) found that this group of students experience unique stressors compared to students in general education. In their study, the term "stress" refers to the psychological perception of stress, which occurs when an individual believes that he or she does not have enough resources to overcome a difficult circumstance or demand. A total of 480 students (9^{th} to 12^{th} grades) from four high schools in a southeastern state in the United States answered a set of questions, including a demographic questionnaire and surveys that inquire about personality, perceived stress, life satisfaction, psychopathological symptoms, social support, and school climate. Students also self-reported cumulative weighted GPAs. Finally, participants' attendance, Office of Discipline Referrals (ODRs), and tardiness data were collected. Analyses revealed that students in Advanced Placement/International Baccalaureate courses reported higher perceived stress compared to students in general education. This may be due to the combination of extreme demands from their academic program, pressure to prepare to college, and experiencing the normative challenges as adolescences. Case in point, an earlier study found that IB students perceived academic requirements as the biggest contributor to their stress level (Suldo, Shaunessy-Dedrick, Thalji, Michalowski, & Shaffer, 2009). Moreover, Suldo et al. (2009) found that higher level of stress among their participants is associated with negative outcomes (i.e., more psychopathology symptoms as well as reduced academic functioning). These findings pose a need to support this group of traditionally underserved population. Unfortunately, as mentioned earlier in the chapter, there is a lack of studies that examine how best to support high school students, especially those who are enrolled in accelerated curricula.

Existing supports designed for general students or those with disabilities may not be appropriate for students in accelerated courses as they experience unique stressors and strengths (Suldo, O'Brennan, Storey, Shaunessy-Dedrick, 2018). On the bright side, these findings have also led researchers to investigate how best to support high school students who are taking Advanced Placement classes or enrolled in the International Baccalaureate program.

Supporting students in accelerated curricula through the Multi-Tiered Systems of Support framework. After realizing that students in accelerated curricula experience more stress compared to general education students and that high stress level poses risk for worse emotional and academic functioning, Suldo, Shaunessy-Dedrick, Ferron, and Dedrick (2018) conducted a large-scale study to identify malleable factors that are associated with success among Advanced Placement/International Baccalaureate students, with the hope of identifying targets for intervention development tailored to this group of students. Consistent with the comprehensive definition of student success described earlier in the chapter, Suldo, Shaunessy-Dedrick, Ferron, and Dedrick (2018) considered a successful Advanced Placement/International Baccalaureate student to thrive social-emotionally (i.e., high life satisfaction, low psychopathology, and minimal school burnout) and academically (i.e., high GPA and Advanced Placement/International Baccalaureate exam score). A total of 2,379 students in accelerated curricula (9^{th} to 12^{th} grades) from 20 school programs participated in the study. After investigating 34 potential predictors of success (e.g., stressors, coping styles, student engagement, family features, school climate, and demographic factors), Suldo, Shaunessy-Dedrick, Ferron, and Dedrick (2018) found that emotionally successful students in accelerated curricula (a) utilize problem-focused coping skills, (b) possess high level of achievement motivation, (c) are emotionally and cognitively engaged in school and (d) have parents who are

authoritative. On the other hand, they found worse social-emotional outcomes to be associated with students who use avoidance coping strategies. These students also tend to experience higher levels of home (e.g., parent-child conflict) and school-related (e.g., academic and social struggles) stress. As for academic success, it appeared most explained by students' academic history (e.g., performance in 8th grade), but also predicted by family SES, students' motivation to achieve, cognitive engagement, and eustress. Risk factors associated with worse academic outcomes include high level of parent-child conflict and use of avoidance coping strategies.

After Suldo, Shaunessy-Dedrick, Ferron, and Dedrick (2018) identified the predictors of success (i.e., plausible factors to target in interventions) among students in accelerated curricula, it became possible to develop research informed interventions appropriate for this group of students. Fortunately, there are various malleable variables that can be incorporated. Specifically, findings suggest the inclusion of (a) ways to cope with academic stressors (e.g., utilize problem-focused coping styles and minimize avoidance coping strategies, (b) methods to increase student engagement, and (c) tactics to promote authoritative parenting.

Although Suldo, Shaunessy-Dedrick, Ferron, and Dedrick's (2018) study shed light on promising targets for intervention development, the method to deliver the intervention remained unanswered. In line with the MTSS model, that research group proposed that one way to support the unique needs of students in accelerated curricula is through providing services that match their need intensity. With funding from the Institute of Education Science (IES) in a grant (R305A150543) awarded to Drs. Shannon Suldo and Elizabeth Shaunessy-Dedrick (University of South Florida, College of Education), a universal curriculum is being developed to support all students who are taking Advanced Placement classes or enrolled in the International Baccalaureate program, as well as a targeted intervention is being developed to provide

additional support to students in accelerated curricula who are at-risk academically and/or emotionally. Targets of both interventions stemmed from the findings of Suldo, Shaunessy-Dedrick, Ferron, and Dedrick (2018) as described in the previous paragraph. In terms of intended population, the research team decided to focus on 9th grade students enrolled in Advanced Placement courses or a pre-IB program. As aforementioned, the transition between middle and high school is a stressful period for students (pubertal changes, social stress, identity formation; Cohen & Smerdon, 2009). Students enrolled in accelerated curricula experience another layer of stress (i.e., higher academic demands) on top of the normal adolescent struggles that might lead to worse emotional and academic outcomes (Suldo et al., 2009). Consistent with the MTSS philosophy of early prevention, the universal and targeted intervention in development are designed to be delivered to students in accelerated curricula during their first year of high school but can likely be adapted to support this group of students throughout their high school career.

Universal support – Advancing Coping and Engagement (ACE). The Advancing Coping and Engagement (ACE) for AP and IB student success program is a 12-week universal curriculum under development to support all students in accelerated curricula to be academically and emotionally successful (Suldo, O'Brennan, Storey, & Shaunessy-Dedrick, 2018; Suldo et al., 2019). The definition of success remained the same as the one described in Suldo, Shaunessy-Dedrick, Ferron, and Dedrick's (2018) study. A successful student in accelerated curricula demonstrates emotional (i.e., satisfied with life, minimal sign of psychopathology, and not overwhelm by schoolwork) and academic (i.e., high GPA and Advanced Placement/International Baccalaureate test score) competence.

The universal program has three main goals. Through psychoeducation, role-play, testimony from previous students in accelerated curricula, practice exercises, and other active

instructional strategies, ACE aims to teach 9th grade students in accelerated curricula how to (a) be more engaged with teachers, program, and school (i.e., increase connectedness with others at school and participation in extracurricular activities), (b) use problem-focused coping strategies, and (c) minimize usage of avoidance coping strategies. Problem-focused coping strategies (e.g., time and task management, seeking support, relaxation, and positive thinking) are deemed effective based on Suldo et al.'s (2018) study described above. Similarly, avoidance coping strategies (e.g., withdraw and rely on self, skipping school, using illicit substances) are deemed ineffective based on the same large-scale study (Suldo et al., 2018). The ACE program also includes a teacher and parent component. Teacher trainings have been provided both in-person and online to prepare teachers to participate in the facilitation of the student-focused modules. The program also offers two in-person workshops (one on program rationale, the other on authoritative parenting) for parents. In addition, parents receive weekly flyers that describe the ACE module content and tips on continuing the education at home.

The ACE student program contains 12 modules (2 on introduction and research, 3 on student engagement, 5 on coping, 1 on eustress, and 1 on strengths, values, and goals). The first 10 modules are the core of the program, whereas the last two (i.e., eustress and strengths, values and goals) are designed to provide booster/follow-up sessions. More details on the ACE program can be found in Suldo, Parker, Shaunessy-Dedrick, and O'Brennan (2019) chapter in *Handbook of Student Engagement Interventions: Working with Disengaged Youth*, which include description and sample learning experiences from the ACE engagement modules.

The modules were developed during Year 1 (2015-16) of the 4-year grant (2015-19), with iterative feedback from students in accelerated curricula, teachers, administrators, parents, and content experts. In Years 2 and 3 of the grant, the research team delivered the first 10 modules in

the Fall, once per week for approximately 50 minutes per module. The booster modules were delivered early in the Spring (depending on school availability), each again lasting approximately 50 minutes. Year 2 (2016-17) of the grant involved 15 classes from 2 high schools in 1 district (implementation trial); whereas Year 3 (2017-18) included 16 classes from 8 high schools in 3 districts (outcomes compared to 7 high schools initially assigned to a waitlist control group, which was provided the refined intervention materials in Year 4 [2018-19]).

Screening. The President's New Freedom Commission on Mental Health (Hogan, 2003) proposed that any comprehensive school-based mental health services should include screening practices to identify students showing risk factors and provide early intervention. After the delivery of the universal ACE program, the research team created a midyear check-in procedure to screen for students with signs of risk for diminished academic or emotional success (Suldo, Storey, O'Brennan, et al. 2019). In addition to asking students to report unweighted GPA and midyear Advanced Placement/International Baccalaureate course grade, two self-report questionnaires were included in the one-page screener. The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) assesses students' level of perceived stress. The School Satisfaction scale of the Multidimensional Life Satisfaction Scale (MSLSS; Huebner, 1994) asks students to rate on a 6-point scale (*1 = Strongly disagree* to *6 = Strongly agree*) on how they have felt about school over the past several weeks. In addition, the students' academic records (i.e., unweighted GPA and Advanced Placement/International Baccalaureate course grades) are examined with assistance from school administrators to ascertain information from report cards.

The screening process that follows the universal intervention (ACE) is intended to identify students in accelerated curricula who are at-risk for diminished emotional or academic success at midyear of 9th grade. The screening process adopts a multi-method (self-report

questionnaire, school records) approach to identify students who are at-risk emotionally and/or academically. Specifics on the screening procedure proposed to be used in the current study are described in Chapter III. The next section of this chapter describes the targeted support developed for students who demonstrate risk through any of the methods, specifically a one-on-one coaching session referred to as Motivation, Assessment, and Planning (MAP) meetings.

Targeted support – Motivation, Assessment, and Planning (MAP). Motivation, Assessment, and Planning (MAP) is an individualized, selective intervention in development that aims to provide additional support to students in accelerated curricula who demonstrate risk factors for diminished academic and emotional success during the middle of their 9th grade year (O'Brennan et al., 2019; Suldo, Parker, Shaunessy-Dedrick, & O'Brennan, 2019). Grounded in Motivational Interviewing (MI), the MAP coach helps at-risks students (identified through the screening described above) to (a) reflect on current levels of coping and engagement, (b) choose to work on a coping or engagement skill that is related to success in accelerated curricula, and (c) create an action plan to reach self-determined goal. The emphasis on improving coping and engagement skills links to the universal ACE program. The goal of MAP is to encourage students to further build on the coping and engagement skills taught to them in the ACE program as those factors have been found to correlate with success among students in accelerated curricula. Table 3 summarizes the coping and engagement skills taught through the ACE program. Students are encouraged to increase use of effective coping styles, limit use of ineffective coping styles, and improve use of engagement skills. In addition to coping and engagement, students can also choose to tackle other factors related to success among students in accelerated curricula, namely *eustress* and *perceived parenting practices* (authoritative parenting).

Table 3

Coping and Engagement Skills Addressed in the ACE Program

Effective Coping Styles (i.e., problem-focused coping skills; associated with both academic and emotional success)	**Ineffective Coping Styles** (i.e., avoidance coping skills; associated with worse academic and emotional outcomes)	**Engagement Skills** (i.e., emotional or behavioral engagement)
• Time and Task Management • Positive Thinking • Relaxation • Seek Academic Support • Turn to Family • Turn to Spirituality	• Withdraw/Self-Reliance • Skip School • Take Short Cuts at School • Reduce Effort on Schoolwork • Use illicit Substances • Sleep to avoid stress	*Emotional Engagement*: • Build Relationship with Others at School • Increase School Pride *Behavioral Engagement*: • Participate in Extracurricular Activities

Assessment of current student functioning. In order to help students reflect on their current use of coping and engagement strategies, the MAP coach administers a packet of surveys (i.e., selective stage assessment) to students before the first MAP meeting. The survey packet includes a list of questionnaires that tap into a student's current level of functioning. After a student fills out the packet, the MAP coach enters the student's responses into a computerized scoring system using Microsoft Excel. The Excel program generates scores that reflect students' current use of coping strategies, level of student engagement, eustress, and perceived parenting practices. A student's raw scores are converted to T-scores, in line with comparison to a normative sample of more than 2,000 Advanced Placement/International Baccalaureate students across the state of Florida obtained from a previous study (Suldo, Shaunessy-Dedrick, Ferron, & Dedrick, 2018). Converted scores are represented on a graph, which the MAP coach introduces in MAP Meeting One. A sample graph is included as Appendix A.

MAP Meeting 1. The MAP intervention adopts the MI spirit, processes, and core skills as described in the earlier section (Miller & Rollnick, 2012). The protocol consists of four sections,

which align with the four processes of MI (engaging, focusing, evoking, and planning). In the stage of *engage*, the coach gets to know the student better through discussing their strengths, values, and long-term goals. Then, the coach links those personal attributes to the ACE targets – coping and engagement. In the *focus* stage, the coach provides feedback on the student's current level of coping, engagement, eustress, and perceived parenting practices. After some reflections, the coach guides student to choose a target to work on. During *evoke*, the coach uses MI strategies to elicit students' motivation and reasons for change. Finally, the coach collaborates with students to create an action plan to fulfill their goal during *planning*. Throughout the meeting, the coach utilizes the core skills of MI (Open questions, Affirmation, Reflection, and Summarize [OARS]; Miller & Rollnick, 2012) to create a safe, collaborative atmosphere. Moreover, a handout—the Student Success Planning Guide— is used to lead a student through the intervention. The end of the guide includes an action planning form to be completed by the student and coach during the planning stage. The student and coach each keep a copy of the plan after the session. Table 4, adopted from the MAP intervention protocol, provides more description of the activities involved in MAP meeting 1, including an approximate timeline. For more information on the MAP meeting 1, Suldo et al. (2019) included a case study that illustrates the intervention.

Reminder letter. After the first MAP meeting, the coach sends a 1-page letter to students to communicate care and to encourage students to enact their action plan if they have yet to do so. In the letter, the coach expresses his or her excitement to meet again, includes a copy of the student's action plan, and lists some additional questions for students to ponder before the next meeting. Along with the typed letter, the coach can send a handwritten note or card for a personal touch. A sample reminder letter is included as Appendix B.

Table 4

Summary of MAP meeting 1

MI Processes	Activities, Strategies, and Objectives	Approximate Length
Engage	• Introduction to coach and meeting purpose. • Review values, strengths, hopes, and goals for the future. • Summarize how student's background fits with ACE targets	10-15 minutes
Focus	• Elicit student knowledge of areas related to academic and emotional success. • Orient student to norm-referenced feedback graph and review individualized graph with student. • Develop discrepancy between student's weaknesses and comparison groups and/or personal goals. • Agenda map and prioritize area(s) of change	20-25 minutes
Evoke	• Pose evocative questions that elicit change talk • Reinforce any change talk with OARS.	5 minutes
Plan	• Collaboratively brainstorm strategies for meeting goals using Problem-Solving Process in Action form. • Create an action plan that specifies action steps, supports needed, and a timeline. • Increase hope and confidence in making change.	15 minutes

MAP meeting 2. Similar to MAP meeting 1, the second meeting includes the four processes of MI (engage, focus, evoke, plan). A unique component of meeting 2 is that the coach reviews students' progress towards the goal set in previous meeting. Using the progress towards goal form (attached as Appendix C), the student reports if he or she had done *none*, *some*, or *completed* each step listed on the action plan. Whether or not the student made progress, the coach reflects students' reports in a non-judgmental way. During focus, the student can choose to retain the same target or select a new target to work on. The processes of evoke and planning remains almost the same as MAP meeting 1, except the coach terminates the relationship at the end of MAP meeting 2, arranging additional support (e.g., continued school-based counseling) for students if necessary. In terms of student materials, the second meeting also includes a

Student Success Planning Guide that is slightly different from the one for meeting 1. Specifically, the agenda listed at the front of the guide is different as the second meeting also includes a section in which the coach reviews progress towards goal with students based on the action plan they developed in their first meeting. Table 5, adopted from the protocol, includes more details on the activities involved in MAP meeting 2.

Table 5

Summary of MAP Meeting 2

MI Processes	Activities, Strategies, and Objectives	Approximate Length
Engage	• Re-introduction to coach and meeting purpose • Revisit and reaffirm the student's previously expressed strengths, values, hopes, and aspirations for the future • Elicit student memory about goal developed during MAP Meeting 1 • Discuss current progress towards target/goal • Summarize understanding of student's current progress toward goals	10-15 minutes
Focus	• Help student decide to retain target or select new target • Revisit student's individualized graph (score report) if applicable	8-10 minutes
Evoke	• Elicit and reinforce change talk • Following a sufficient amount of change talk, ask a key question • Move to planning with a transition question	5-7 minutes
Plan	• Elicit and reinforce change talk regarding new/revised plan • Help the student brainstorm strategies for meeting goal • Create an action plan that specifies action steps, supports needed, and a timeline • Increase hope and confidence in change • Terminate relationship; plan for further supports if applicable	15 minutes

Rationale for a MI-based intervention. Several factors led the research team to select MI when developing a targeted intervention for students who are enrolled in accelerated curricula. As aforementioned, MI has been shown to be effective in helping adolescents shape healthy

behaviors in clinical settings (Lundahl & Burke, 2009). Moreover, Snape and Atkinson's (2016) meta-analysis on school-based student-focused MI interventions revealed that this approach showed promising results in helping students (a) advance academically (e.g., improve grades), (b) be more emotionally engaged (e.g., better attitude towards school), and (c) be more behaviorally engaged (e.g., higher attendance, homework completion, and classroom participation). These targets (i.e., academic success and student engagement) align with the universal ACE program's intervention focus and ultimate goal. Furthermore, the time-efficient nature of MI-based interventions (i.e., the potential to achieve positive results with just one or two sessions) makes it an excellent fit for a targeted intervention in schools, where time is always scarce. Although the effectiveness of MI has yet to be tested with students in accelerated curricula, this population seems to be good candidates because this group of students tends to demonstrate higher cognitive skills, as evidenced by their superior academic performance compared to general education students (Suldo et al., 2013), which may help them better handle the cognitive demands of the MI process. Moreover, this group of students are also adolescents who crave autonomy, which aligns well with the collaborative nature of the MI approach.

Evidence of promise of MAP. Theoretically, MI is an appropriate approach to provide targeted support to students who are in Advanced Placement classes or pre-International Baccalaureate program to succeed emotionally and academically. Thus, the research team developed the MAP intervention based on MI principles. To test its feasibility, acceptability, and fidelity in actual practice, Year 2 of the grant entailed an implementation trial; 49 students from 2 high schools in 1 district participated in MAP. Among the 49 participants, 40 were identified at at-risk through a screening process; the other 9 volunteered. To be identified as at-risk, the student either shown *academic* (GPA < 3.0, Advanced Placement/International Baccalaureate

course grade ≤ C) or *emotional* risks (elevated stress [Perceived Stress Scale score > 3.6; Cohen et al., 1983], negative feelings about schooling experiences [School Satisfaction scale < 3.4; Huebner, 1994]) through self-report questionnaires, or was *nominated* by their teacher. Regarding feasibility, research team records indicate that MAP Meeting One lasted on average 58.33 minutes (*SD* = 9.33 minutes) and MAP Meeting Two took an average of 40.79 minutes (*SD* = 11.02 minutes). Coaches completed the meeting with high fidelity to protocol: average fidelity for meeting 1 = 96%, *SD* = 3%; meeting 2 = 95%; *SD* = 5%. Approximately 85.7% of students returned for MAP meeting 2. Brief measures of intervention acceptability were completed by youth after each MAP meeting. Table 6 illustrates that participants find the MAP intervention highly acceptable, with means that range from 3.8 to 4.8 on a scale range from 1 to 5 (*1 = strongly disagree* to 5 = *strongly disagree;* Suldo, Shaunessy-Dedrick, O'Brennan, Parker et al., 2018). Students generally liked the intervention materials, liked the action planning process, felt connected to the coach, and will recommend the meeting to a friend. Table 6 also shows that students felt ready to change after MAP meeting 1 and strongly agree that they have made progress towards self-determined goal after MAP meeting 2.

The support for feasibility, acceptability, and fidelity summarized above indicated to the research team that MAP was ready for inclusion in Year 3 grant activities. Analysis of data from the 121 students and 7 coaches who participated in Year 3 MAP meetings during spring 2018 is in progress. From Spring to Fall 2018, the research team solicited feedback on perceived utility of MAP from school mental health providers (*n* = 12) who worked for the schools and districts

Table 6

Student Acceptability and Preliminary Outcomes from Year 2 Implementation Trial

	MAP Meeting 1	**MAP Meeting 2**
Intervention materials (Meeting 1: selective stage assessment packet, graph, student success planning guide; Meeting 2: reminder letter)	4.4	3.8
Action planning process	4.5	4.5
Alliance with MAP coach	4.3	4.3
Recommend to friend	4.4	N/A
Readiness for change	4.5	N/A
In weeks after meeting: Made Progress towards goal	4.8 (reported in MAP meeting 2)	N/A

Note. Scale from *1 = strongly disagree* to 5 = *strongly disagree*, N/A = Not Applicable

that participated in Year 3 grant activities. Demographic information of these participants is summarized in Table 7. Participants worked in three districts located in Florida. District A was an urban school district serving approximately 200,000 students including through 27 high schools in the 2017-2018 school year; District B was a largely rural school district serving approximately 70,000 students through 14 high schools in the 2017-2018 school year; District C was an urban school district serving approximately 100,000 students through 18 high schools in the 2017-2018 school year. The research procedures completed by the participants included: review MAP Meeting One protocol; listen to de-identified audio file of MAP Meeting One enacted with an student in accelerated curricula at a different school; meet with a researcher to provide feedback to the usefulness of the meeting protocol, materials, and stages; and repeat process for MAP Meeting Two, from protocol review to feedback (including review of audio file from 2nd meeting with same student participant featured in Meeting One).

Preliminary analysis of this qualitative data conducted by the research team (including this author and other graduate students as well as three faculty) suggested that all (N = 12) participants perceive the action planning stage as an important part of the MAP intervention. For example, participant 05 said, "[The action plan] is a huge component of the intervention because you can talk in circles but not do anything about it unless you engage in this type of behavior [action planning] and document it." Some participants even shared that they believe the first three stages (engage, focus, and evoke) can be streamlined to focus more on action planning, as indicated by participants 06 when she said, "I would actually like to see the action plan to be more of a focus. I would like to see the other sections be shortened so that more time could be spent on the practical portion – the action plan… I like it [action planning] so much that I want more." Participants further explained that action planning is essential because it provides students a clear plan to reach self-determined goals, and it acts as an accountability system, where the coach can check-in on the student's progress towards goal. For instance, participant 11 said, "I think that it [action planning] is very useful because otherwise he [student] would have just walked away and this would've been a good conversation, but he wouldn't have done anything about it. You [coach] in a gentle way forced him to think about what he will do and made him accountable for those things." Participant 07 further illustrates the theme, "Students can report anything back to you, like yes, I've been doing this… but instead of just taking the student's word for it, I feel like it would be more valuable to have another person to support [students], whether things are working out or not." As school mental health providers often have a large case load or other school responsibilities, it is understandable that they are looking for ways to save time on intervention. Moreover, as the field of education continues to put pressure

on school professionals to demonstrate accountability, it is logical to see why the action planning stage appeals to the mental health providers perhaps more than the other three stages of MI.

Table 7

Participants from School Mental Health Providers' Perceived Utility of MAP Meetings Study

Code	Role in School	District	Gender	Ethnicity
01	SP	C	Female	White
02	SC	C	Female	African American
03	SP	B	Female	White
04	SC	A	Female	White
05	SP	A	Male	White
06	SP	B	Female	African American
07	SC	B	Female	African American
08	SC	B	Male	White
09	SP	A	Female	White
10	SC	A	Female	White
11	SP	C	Male	White
12	SP	B	Female	White

Note. SP = School Psychologist, SC = School Counselor.

Action planning (AP) has been shown to be help adults increase healthy behaviors. It is possible but unknown if it can achieve the same goals of the MAP intervention, when delivered in isolation without the other three stages. To the best of this author's knowledge, there are no studies that looked at the effects of action planning alone in a school setting, but it has demonstrated promising results as part of other interventions such as Cognitive Behavior and Behavior Therapy (Kendall, 2011; Kratochwill, & Stoiber, 2000; Langberg et al., 2012). In contrast, there are promising evidence for school-based student-focused MI interventions (Snape & Atkinson, 2016). This poses a dilemma because action planning alone cannot be considered a MI intervention. According to Miller and Rollnick (2012), an intervention cannot be considered MI-based if the first three processes are absent. Returning to the staircase model used to explain the four processes of MI (figure 1), engage, focus, and evoke are all pre-requisites to action planning. The three stages also form the foundation of MI, which Miller and Rollnick (2012)

recommend revisiting as necessary. In summary, school mental health providers perceive that action planning is the most important part of the MAP intervention and recommend streamlining the intervention accordingly. However, MI experts argue that the other three stages of MI are essential to make MAP a MI-based intervention (Miller & Rollnick, 2012), which has more evidence for efficacy in the school setting compared to action planning alone. These competing views are at the crux of the gap in the current literature that was addressed by this study, as this literature review indicated a need to compare the efficacy of MAP with an AP intervention.

Conclusion and Gaps in Current Literature

Multi-tiered Systems of Support (MTSS) for student success entail universal and targeted supports for all students K-12. A review of the literature revealed that evidence-based social-emotional supports tend to be focused on younger students, with limited options for social-emotional services in high schools. This is concerning as researchers have found that students tend to experience increasing academic and social-emotional challenges during their transition from middle to high school (i.e., 9th grade), which put them at-risk for worse outcomes such as diminished academic achievement and engagement (Benner & Wang, 2014; Eccles & Roeser, 2011). This signifies a need for more research on social-emotional interventions developed for older students. Specifically, there is a group of high school students that is traditionally underserved –youth enrolled in accelerated courses such as Advanced Placement classes or International Baccalaureate program. These students are usually performing well enough to stay enrolled in their accelerated classes but may suffer from the additional stress originating from rigorous coursework and high expectations (Suldo et al., 2013; Suldo, O'Brennan, Storey, & Shaunessy-Dedrick, 2018). As most of the current interventions are designed for general

education student or student with disabilities, there is a gap in the current literature to develop interventions that meet the unique needs among students in accelerated curricula.

Based on a large-scale study that examined factors that predict success among students in accelerated curricula (Suldo, Shaunessy-Dedrick, Ferron, & Dedrick, 2018), Drs. Shannon Suldo and Shaunessy-Dedrick (University of South Florida, College of Education) set on a path to develop a multi-tiered support for this group of underserved students with funding from IES (grant R305A150543). The support in development includes a universal component (Advancing Coping and Engagement; ACE), screening, and a targeted support (Motivation, Assessment, and Planning; MAP). They adopted the Motivational Interviewing (MI) approach for the targeted support – MAP, as it has shown promising results in school-based application (Snape & Atkinson, 2016). Specifically, school-based student-focused MI interventions have been shown to be effective in improving students' academic achievement and engagement in school, which aligns with the targets of ACE and MAP. Although preliminary examinations of MAP have provided support for feasibility, fidelity, and acceptability, further studies are needed to examine its efficacy. Qualitative feedback from school mental health providers revealed that they view action planning as an essential component of the MAP intervention. Some even recommend streamlining the other three stages (engaging, focusing, evoking) to make more time for action planning. Although action planning has shown to be effective in increasing healthy behaviors among adults, to the best of the author's knowledge, its school-based application is untested with action-planning occurs in isolation, that is outside a larger cognitive-behavioral (Kendall, 2011) or behavioral intervention such as HOPS (Langberg et al. 2012). In contrast, MI has shown great promises when applied to school settings (Snape & Atkinson, 2016). The current study thus

aimed to fill in this gap of the literature through examining the efficacy of MAP compared to an AP intervention.

Chapter III: Method

This study examined the efficacy of a targeted intervention in development to support academically or emotionally at-risk 9th grade student in accelerated curricula – Motivation, Assessment, and Planning (MAP). Specifically, this study compared the efficacy of MAP to Action Planning (AP) intervention. This study is part of a larger 4-year study funded by IES (grant R305A100911) awarded to Drs. Shannon Suldo and Elizabeth Shaunessy-Dedrick, professors in the USF College of Education. The grant's aim is to develop a comprehensive intervention to support emotional and academic success among students enrolled in accelerated curricula. Currently under development is a (a) universal program (Advancing Coping and Engagement, ACE), (b) screening procedure, and (c) targeted intervention (MAP). This study aims to advance the efficacy investigation on the last component of the comprehensive intervention – MAP. Thus, the research procedure includes implementation of the first two components (ACE and screening), but it is not the aim of this study to examine their efficacy or appropriateness. This chapter describes the current study's design, procedures, intervention overview, outcome measures, and proposed analyses. It ends with a discussion of ethical considerations.

Research Design

The current study is a mixed methods study. The majority part of the study adopts an experimental, randomized, within-subject design in which each participant serve as their own control. To further explain the design, participants were randomly assigned to either receive a MAP or AP intervention during their first meeting. Then, participants received the other

condition (the one they had yet to receive) during their second meeting. This way, all participants were exposed to both conditions in this study (i.e., MAP vs. AP). The advantage of using a within subject design is that it requires fewer participants and it helps reduce errors associated with individual differences. However, there might be carryover (e.g., student feel more connected to the MAP coach during the second meeting no matter which condition he or she was in previous meeting) or practice (e.g., students get better at action planning after one exposure) effect. A smaller part of this study is qualitative in nature, involving open-ended questions included in the acceptability survey and a brief exit interview. This study adopted a constant-comparative method to analyze the qualitative responses from participants.

Participants

Thirty students in Advanced Placement Human Geography class from one high school located in a large, urban district in a Southeastern state were invited to participate in the current study. The district has 18 high schools that served 103,242 students in the 2017-18 school year. This high school was assigned to the control condition in Year 3 (2017-18) of the larger IES-funded project and had requested the research team implement the universal curriculum (ACE), screening, and targeted intervention (MAP) with the target population (freshmen in Advanced Placement Human Geography) in Year 4 (2018-19). During the 2018-19 school year, 71 students were enrolled in 3 sections of Human Geography. All of these students received the ACE program and participated in the midyear screening, as part of the school's commitment to supporting freshmen in accelerated courses. A parent notification letter with an option to opt out of screening was sent home with all students in Advanced Placement Human Geography. One student's parents opted out of screening, and that student was deemed not eligible to participate in this study, due to lack of screening data.

Out of the 70 students who participated in the universal intervention (Fall 2018) and completed screening (January 2019), 30 students (43%) were identified as emotionally or academically at-risk in the screening using cut scores developed from risk observed in prior samples of AP/IB students (see Suldo, Storey, et al., 2019). Specifically, cut points for academic risk are state GPA < 3 and/or Human Geography semester one course grade of "C" or below; cut points for emotional risk are School Satisfaction Scale mean < 3.4 and/or Perceived Stress Scale mean > 3.6. More information on the measures used for screening are documented later in this chapter. Within the group of at-risk students, 5 had academic risk only, 15 had emotional risk only, and 10 met thresholds for risk in both domains.

All 30 students who were at-risk were invited to participate in the study. A total of 3 students declined participation by refusing to bring consent forms home to parents. No parent denied consent. After 20 participants returned consent forms, recruitment and study enrollment stopped due to logistical concerns (i.e., the sole interventionist was likely unable to serve more than 20 participants in the study timeline, February to April 2019). Only students with written consent and assent (Appendices L and M) participated in the study. The remaining 7 out of 10 students identified as at-risk were offered MAP meetings by other interventionists supported by the larger grant (3 students declined services).

Among the twenty participants, four had academic risk only, eight had emotional risk only, and eight met thresholds for risk in both domains. Half of the participants within the group (type of risk) were randomly assigned to the first condition (MAP → AP), and then the other half assigned to the second condition (AP → MAP). The twenty participants included seven males and thirteen females; two Asian, one Latina, and seventeen White students. Participants' GPA in Fall 2018 ranged from 1.80 to 4.00; Human Geography grade in Fall 2018 ranged from F to A;

satisfaction with school range from 2.50 to 4.75 (scale 1 to 6); and perceived stress range from 1.50 to 4.67 (scale 1 to 5). Table 8 provides more details on participants' demographic features and screening scores.

Table 8

Participants Demographics and Screening Details

Code Number	Group	Gender	State GPA	Advanced Placement Human Geography Grade	School Satisfaction Scale Mean	Perceived Stress Scale Mean	Type of Risk
1	2	M	3.00	2	4.00	1.83	0
2	2	M	3.35	2	4.75	2.67	0
3	1	F	1.80	0	4.38	3.17	0
4	1	F	3.42	2	4.13	2.33	0
5	1	M	4.00	4	3.88	3.67	1
6	2	F	3.54	3	3.63	5.00	1
7	2	M	3.92	4	3.50	5.00	1
8	2	F	4.00	4	2.63	4.67	1
9	2	F	4.00	4	3.38	3.33	1
10	1	F	3.58	3	4.25	4.33	1
11	1	F	3.60	3	3.13	3.33	1
12	1	F	3.91	4	3.13	3.33	1
13	1	M	2.75	2	3.38	1.50	2
14	1	F	3.28	2	3.00	4.33	2
15	1	M	2.00	1	2.50	4.17	2
16	2	F	3.27	2	3.75	4.83	2
17	2	F	3.46	2	3.88	4.33	2
18	1	M	2.83	1	3.25	2.50	2
19	2	F	3.54	2	4.50	4.50	2
20	2	F	3.16	3	3.50	4.00	2

Note. For group, 1 = MAP → AP; 2 = AP → MAP. School Satisfaction Scale came from the Multidimensional Students Life Satisfaction Scale. Cut points for academic risk are GPA < 3 and/or Grade C or below; cut points for emotional risk are School Satisfaction mean < 3.4 and/or Perceived Stress mean > 3.6. For grade in Human Geography, 4 = A, 3 = B, 2 = C, 1 = D, 0 = F. For type of risk, 0 = Academic Only, 1 = Emotional Only, 2 = Both. Grade and GPA were from Fall 2018.

Procedures

As aforementioned, this study is embedded within a comprehensive intervention designed to support the success of students in accelerated curricula. This section details the procedures throughout the comprehensive intervention, but the focus of this study was on the last component – selective intervention implementation.

Universal intervention implementation. All students at the high school taking Advanced Placement Human Geography participated in the 12-week universal intervention (ACE) during their Advanced Placement Human Geography class in Fall 2018 (10 core modules delivered once a week, approximately 50 minutes per module/week) and Spring 2019 (2 booster modules delivered over two weeks, approximately 50 minutes per module/week). This author facilitated delivery of the module with support from the classroom teacher. This author is a graduate research assistant (M.A. level trainee) and part of the research team for the larger grant. This author is one of many graduate students who assists on the project. She received extensive training (self-study and mock deliveries) to deliver the ACE program and had implemented the modules in an intervention high school in Year 3 (2017-18). The classroom teacher was present for the majority of the modules to aid in behavior management and co-facilitated some of the content. Table 9 demonstrates the modules included in the ACE curriculum. Additional information on the ACE program can be found in Chapter II.

Recruitment of participants for selective intervention. In Spring 2019, a multi-method screening was conducted to identify participants for the selective intervention (i.e., two one-on-one coaching sessions). The goal of the screening process was to identify students in accelerated curricula who have early signs of emotional or academic challenges and provide early

Table 9

Modules in Advancing Coping and Engagement (ACE)

Module	Content/Topic
1	Adjusting to Advanced Placement/International Baccalaureate: Role of Stress
2	Factors Related to Advanced Placement/International Baccalaureate Success
3	Engagement: Forming School Pride
4	Engagement: Forming Strong Connections to Advanced Placement/International Baccalaureate Teachers
5	Engagement: Extracurricular Activities at School and Community
6	Coping Time and Task Management 1
7	Coping: Time and Task Management 2
8	Coping: Relaxation and Positive Thinking
9	Coping: Seeking Support from School and Beyond
10	Coping: Minimizing Use of Ineffective Strategies
11	Promoting Eustress & Review of Coping and Engagement Tools
12	Strengths, Values, and Goals

intervention. Targets of the screening process were factors most salient to success among students in accelerated curricula, namely perceived stress, connectedness to school, and academic performance. Parents of all the students who participated in the universal intervention in the Fall received a "notification of screening" letter to inform parents of the upcoming screening. The letter explained that students would complete a short survey on perceived stress, satisfaction with school, and academic performance, and that data generated from the survey would be used to determine which students will be offered additional support. One parent returned the notification form wishing to exclude their child from the process, and the student was not included in this study. The remaining 70 students filled out a one-page survey on January 17th, 2019. This researcher administered the screening survey to the entire class, during 5-10 minutes of class time. Five students were absent on screening, thus completed the screening individually in the same week. This author also collaborated with a school administrator and the classroom teacher to collect students' academic data (i.e., unweighted semester GPA and

Advanced Placement Human Geography semester grade). More information on the measures and methods are described below.

Perceived Stress Scale. The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983) originally contains 14 items on perceived stress and coping over the previous month. Only 6 items (those on perceived stress) were administered in the current study because the larger research project utilized a different measure to capture student's use of coping strategies. Moreover, Lavoie and Douglas (2012) has found the retained items to appropriately capture overall feelings of distress caused by overwhelmed life circumstances. The scale has a five-point response scale: 1 = *Never*, 2 = *Almost Never*, 3 = *Sometimes*, 4 = *Fairly Often*, and 5 = *Very Often*. A sample item from the PSS includes, "In the last month, how often have you found that you could not cope with all the things that you had to do?" This scale has demonstrated strong internal reliability in Suldo, Shaunessy, and Hardesty's (2008) study with students in accelerated curricula described in Chapter II ($\alpha = .91$). In terms of construct validity, the PSS yielded large associations with another self-report survey on perceived stress (Student Rating of Environmental Stressors Scale; StRESS) among students in accelerated curricula (Suldo, Dedrick, Shaunessy-Dedrick, Roth, & Ferron, 2015). In the current study ($N = 70$), the PSS also yielded high internal reliability ($\alpha = .89$). To interpret the scores, higher scores indicate higher level of perceived stress in the past month.

School Satisfaction subscale of the Multidimensional Students Life Satisfaction Scale. The school satisfaction (SS) scale is part of a larger self-report measure named Multidimensional Student Life Satisfaction Scale (MSLSS; Huebner, 1994). The MSLSS measures students' life satisfaction across domains using a 6-point scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Mildly Disagree*, 4 = *Mildly Agree*, 5 = *Agree*, and 6 = *Strongly Agree*). The domains include 7

items on family, 9 items on friends, 9 items on living environment, 7 items on self, and 8 items on school. This study administered the 8-item school satisfaction scale. A sample item is, "There are many things about school I don't like" [reverse scored]. This scale has yielded excellent internal consistency when used with high school students (α = .84; Zullig, Huebner, & Patton, 2011). In prior research, test-retest reliability for the SS scale was high across four weeks (.70; Huebner, Laughlin, Ash & Gilman, 1998) and one year (.60; Elmore & Huebner, 2010). In this study (*N* =70), the SS scale yielded high internal reliability (α = .80). In terms of interpretation, after reverse-scoring negatively phrased items, higher scores on this survey indicate higher satisfaction with school.

School records. The author examined participants' (a) unweighted GPA and (b) Advanced Placement Human Geography course grade over the Fall 2018 semester.

All data reported by students on the screening survey and provided by school administrators (course grades and semester GPA) were entered into an Excel spreadsheet. Then, the author checked 100% of data were for accuracy by reading aloud each data line on the original format and checking to see if it matches the data entered in the Excel spreadsheet. The cut points for identifying students at-risk were pre-determined based on previous implementation trials (Suldo, Storey, et al., 2019). All students (*N* = 30) who had (a) Fall semester GPA lower than 3.0, (b) AP Human Geography Fall grade C or below, (c) PSS score above 3.6, or (d) SS score lower than 3.4 were offered the opportunity to participate in MAP as part of sanctioned school supports for students in accelerated curricula. The thirty students who met those criteria were also invited to take part in the current study to evaluate critical phases within the MAP protocol. Whereas parent consent was not required to access the routine school support, it was required to take part in the research aspect associated with this dissertation. To recruit students

for this study, this author administered parent consent and student assent forms for students to participate in research. Only students with parent consent and student assent (Appendices L and M) participated in this study. Incentives offered to students who participated in this study included a $10 gift card for each meeting the student attended, totaling up to $20 gift card per participant.

Selective intervention implementation. This study used a stratified random assignment process to assign half of the sample (students with parent consent to participate in research) to condition A (MAP Meeting 1 → AP Meeting 2), and the other half to condition B (AP Meeting → MAP Meeting 2). Once twenty participants were recruited, participants were stratified based on type of risk (i.e., academic only, emotional only, and both). Four participants had academic only risk, eight had emotional only risk, and eight had both risks. The author had to make a slight adjustment to the GPA cut score (from <3 to <3.2) to ensure that each stratum (risk type group) had an even number of participants. Within each of the three strata (risk type group), SAS 9.4 statistical software (SAS Institute, 2013) was used to assign each participant a random number. Half of the participants with the lowest random numbers in each stratum were assigned to the first condition (MAP → AP), the other half was assigned to the second condition (AP → MAP).

Selective stage assessment. A few days prior to their first meeting (MAP or AP Meeting 1), all participants completed the selective stage assessment. This survey packet includes items on *demographic features* (e.g., age, gender, school), *current stressors, use of coping strategies, level of student engagement, perceived parenting practices, and eustress*. It also includes a *values discovery activity*, in which students choose up to 3 values (e.g., family, friends, leisure time) that resonate with them. Students also get to pick up to 3 *character strengths* through a list

of VIA character strengths. Table 10 lists all the questionnaires included in the packet along with some details.

After students filled out the selective stage assessment packet, this researcher entered student responses into a pre-developed scoring program created with Microsoft Excel. The Excel file generated graphs for each student that reflect students' current level of functioning, including current use of coping and engagement strategies. Once the graph was created, this researcher scheduled the first meeting with each student, usually to occur during their elective class or study hall period. This researcher, a graduate student in the School Psychology program who had previously received intensive training in cognitive-behavioral therapy (e.g., completion of EDG 7931 Cognitive Therapy with Children and Adolescents with a course grade of A) and MI (deemed proficient in MI by a MINT-certified trainer, a Ph.D.-level professor with considerable expertise in MI), delivered all the interventions in this study.

Meeting 1. During meeting 1, participants received either a MAP or AP meeting. An overview of MAP vs. AP meetings is described later in this chapter. This researcher scheduled a meeting during a student's elective period. The meeting length ranged from 26 to 55 minutes. In MAP meetings, participants may choose to not complete an action plan, but none of the participants in this study chose to do that. Materials needed for meeting 1 include MAP or AP protocol (Appendices E and F), base graph (Appendix D), student graph (sample attached as Appendix A), and meeting 1 student success planning guide (Appendix G).

Reminder letter 1. Approximately two weeks after meeting 1, this researcher sent a reminder letter to student along with a handwritten note. The letter included a copy of the student's action plan from the first meeting and encouraged students to complete the plan to

Table 10

List of Surveys in Selective Stage Assessment Packet

Survey	Number of Items (Subscale)	Brief Description	Scale Range	Sample Item(s)
Student Rating of Environmental Stressors Scale (StRESS; Suldo, Dedrick, Shaunessy-Dedrick, Roth, & Ferron, 2015)	37	Measure types of stressors students faced over the school year.	1 – 5 (*Never* to *Almost Always*)	How often have you experienced the events or situations listed below this school year? Conflicts or arguments with teachers(s).
Coping with Academic Demands Scale (CADS; Suldo, Dedrick, Shaunessy-Dedrick, Fefer, & Ferron, 2015)	6 (Time and Task Management) 4 (Positive Thinking) 3 (Turn to Family) 3 (Seek Academic Support) 2 (Relaxation) 3 (Spirituality) 4 (Withdraw and Rely on Self) 3 (Sleep) 4 (Reduce Effort on School Work) 3 (Take Short Cuts) 3 (Skip School) 3 (Substance Abuse)	Measures how students in accelerated curricula cope with academic stressors.	1 – 5 (*Never* to *Almost Always*)	Think about the current school year. When you are (or have been) faced with school-related challenges or stress, how often do you: Break work into manageable pieces? Adopt an optimistic or positive attitude? Vent or complain to parent(s). Study with other students? Take deep breathes? Pray? Keep problems to yourself? Take naps? Stop caring about schoolwork? Copy other students' homework and assignments? Take a day off from school to get work done?

Table 10 (Continued)

				Drink alcoholic beverages, such as beer, wine, liquor, etc.?
Eustress Scale (O'Sullivan, 2011)	5	Measure the extent to which students view stress to pose impact on self.	1 – 6 (*Never* to *Always*)	In general, how often do you feel motivated by your stress?
Student Attitude Assessment Survey (SAAS-R; McCoach & Siegle, 2003).	7 (Attitude towards Teacher) 5 (Attitude towards School) 9 (Academic Self-Perception)	Measure students' engagement with teachers, school, and academic self-efficacy	1 – 7 (*Strongly Disagree to Strongly Agree*)	Most of the AP teachers at this school are good teachers. This school is a good match for me. I put a lot of effort into my schoolwork.
Satisfaction with Advanced Placement/International Baccalaureate Classes (Developed and piloted by research team)	1	The research team developed a 1 item measure to gauge students' satisfaction with Advanced Placement/International Baccalaureate class.	1 – 5 (*Strongly Disagree* to *Strongly Agree*)	I am satisfied with my school program (AP classes)
Extracurricular Activity Scale (EAS; Developed and Piloted by Research Team)	15	Estimate the different types and total weekly hours student spend on extracurricular activities.	0 to 12 types; 0 – 10+ hours	On average, in a typical week during this school year, how much time do you spend in... Sports and athletic teams (basketball, cheerleading, tennis, golf, track, soccer, etc.)
Short Dispositional Flow Scale-2 (Jackson, Martin, & Ecklund, 2008)	2	Measure students' flow in their Advanced Placement/International	1 – 5 (*Never* to *Always*)	The time passes more quickly than in other activities.

Table 10 (Continued)

		Baccalaureate classes (motivation)		I am completely absorbed in my work.
Short Grit Scale (Duckworth & Quinn, 2009)	8	Measure students' level of grit (determination and work ethic)	1 – 5 (*Not like me at all* to *Very much like me*)	I am a hard worker.
Standards subscale from Almost Perfect Scale (APS-R; Slaney et al., 2001)	7	Measure students' standards for academic performance	1 – 7 (*Strongly Disagree* to *Strongly Agree*)	I have high expectations for myself.
Parenting Style Inventory-II (Darling, 1997)	5 (Emotional support) 5 (Promote Autonomy)	Measure students' perception of parenting practices	1 – 5 (*Strong Disagree* to *Strongly Always*)	My parent(s) doesn't really like me to tell him or her my troubles.

reach self-determined goal. It also included additional questions for students to ponder before the next meeting. A sample reminder letter is attached as Appendix B.

Meeting 2. Meeting 2 was held approximately 1 to 2 weeks after the reminder letter was sent, thus about 1 month after meeting 1. During meeting 2, participants experienced the condition that they had yet to receive (MAP or AP). This researcher used the same procedure to invite students to the meeting and return them to their classes. Participants could choose to work on the same goal, pick a different target, or not complete an action plan. All participants either chose to work on the same goal (n = 7) or pick a different target (n = 13). Meeting 2 ranged from 21 to 49 minutes in duration. Materials needed for meeting 2 are similar to meeting 1, except that the meeting 2 student success planning guide (Appendix H) was used instead of the meeting 1 student success planning guide (Appendix G).

Reminder letter 2. Reminder letter 2 is similar to the first one and was delivered approximately two weeks after the second meeting. Sample attached as Appendix B.

Termination and exit interview. Approximately 2 weeks after participants received reminder letter 2, thus about a month after meeting 2, this researcher met with students one final time for the purposes of collecting outcome data and intervention termination. This researcher conducted a brief, semi-structured exit interview to gain participants' perception of the two interventions (MAP and AP). This meeting ranged from 6 to 15 minutes in duration. The author ensured that all participants were aware of the school's internal resources in case they need further support in the future.

Field notes. The interventionist (this researcher) recorded details of intervention implementation in the field, including (a) number of contacts needed to recruit and conduct meetings, (b) duration of each contact, and (c) number of days between meetings. In summary,

the author sent parent consent forms home twice (2/6/19 and 2/14/19), and the Human Geography teacher reminded students to return signed forms. The Human Geography teacher helped collect signed parent consent forms from students every school day from 2/7/19 to 2/25/19. Verbal reminders stopped after 20 students returned signed parent consent forms. Out of the 30 students who were determined as at-risk academically and/or emotionally, 20 participated in the current study while 7 received MAP sessions from other interventionists from the larger grant (3 students declined extra supports).

Students with signed parent consent forms had a first meeting with this researcher from 2/12/19 to 2/25/19. Students were called down from an elective period in small groups of 4 to 6 students. All students agreed to participate and signed an assent form. The recruitment (e.g., introduction, explaining the assent form, etc.) took approximately 10 to 15 minutes. Then, participants completed the selective stage assessment packet which took between 25 to 30 minutes. Then, this researcher met with participants for meeting 1 from 2/25/19 to 3/13/19 and sent the first reminder letter between 3/11/19 to 3/21/19. The second meeting took place between 3/26/19 to 4/12/19, and the second reminder letter was sent between 4/8/19 and 4/22/19. Termination and exit interviews (meeting 3) were conducted between 4/22/19 to 5/1/19. The passage of time between meeting 1 and 2 range from 23 to 31 days (M = 28 days). The days between meeting 2 and 3 range from 18 to 30 days (M = 23 days). The shorter duration between meeting 2 and 3 was necessary to avoid meeting with participants during the district testing period (May 2019). Testing period is not ideal for meetings because of the lack of room availability (most empty offices or conference rooms are used to store assessment materials) and the possibility of interfering with students' preparation for tests.

As the interventionist, this researcher also recorded challenges faced in the field. The primary challenge faced relates to some participants' limited responses to questions and reflections. Limited responses posed difficulty with building rapport and eliciting change talk. Two of the participants with limited verbalizations also seemed to exhibit symptoms of anxiety (e.g., fidgeting, difficulty concentrating, restlessness, self-disclose anxiety disorder diagnosis, etc.), whereas another student demonstrated symptoms of Autism Spectrum Disorder (e.g., avoiding eye contact, lack of facial expressions, difficulty understanding metaphors, etc.). Another challenge faced by the author is that some meetings (about 10 out of 60 meetings) were interrupted by other school staff who walked into the room unintentionally. In reaction to an interruption, the researcher usually paused the meeting for a moment, sometimes pausing the audio recording to explain the purpose of the meeting to the interrupter, who was often a concerned school staff. These challenges are not uncommon to applied research in school settings, and participants did not seem to be too bothered by the interruptions. Lastly, some participants struggled to come up with strategies to accomplish their goals. Consistent with the spirit of MI, the interventionist tried to limit advice giving during MAP meetings, which seemed to frustrate some participants. To address this challenge, the elicit-provide-elicit method was used which appeared to help participants come up with a concrete action plan.

Outcome assessment. Outcome measures (described below) were divided into two parts (Part A = importance of and confidence to change, and therapeutic alliance; Part B = goal attainment). Part A was completed immediately after meetings 1 and 2 along with the acceptability items within an outcome assessment survey (Appendix K); part B was assessed immediately before meeting 2 and during termination on the progress towards goal form

(Appendix C). Figure 2 demonstrates the components of this study in a flow chart. More details on the outcome and acceptability measures are included in the sections later in the chapter.

Pilot Study

A pilot study was conducted in Fall 2018 with three School Psychology graduate students (two assigned to condition A, one assigned to condition B) for two reasons. First, this researcher was able to gain practice in implementing the AP protocol while minimizing the use of MI spirit and techniques. Specifically, the pilot meetings were audio recorded and reviewed by a MI expert (i.e., a dissertation committee member who specializes in MI). The MI expert used the Motivational Interviewing Treatment Integrity (MITI; Moyers, Manuel, & Ernst, 2014) coding system to evaluate the author's MI proficiency in the first two out of three pilot meetings. The MI expert scored the author's proficiency in several areas, including the extent to which she (a) cultivate change talk, (b) soften sustain talk, (c) build partnership and (d) express empathy. The mean of (a) and (b) provides a technical global score, whereas the mean of (c) and (d) provides a relational global score. In addition, the MI expert also reported the ratio of complex reflection use compared to total reflection use (i.e., percent of complex reflections) and the ratio of reflection use to question use (i.e., reflection to question ratio). More details on the criteria used to score MITI can be found in Appendix P: Global Dimension Response Options for Motivational Interviewing Treatment Integrity (MITI). The MI expert only coded the first two meetings because the third meeting was meant to be an opportunity for the coach to put into practice the feedback received from the MI expert based on the first two meetings. Table 11 shows the MITI scores for the meetings with the first two pilot participants.

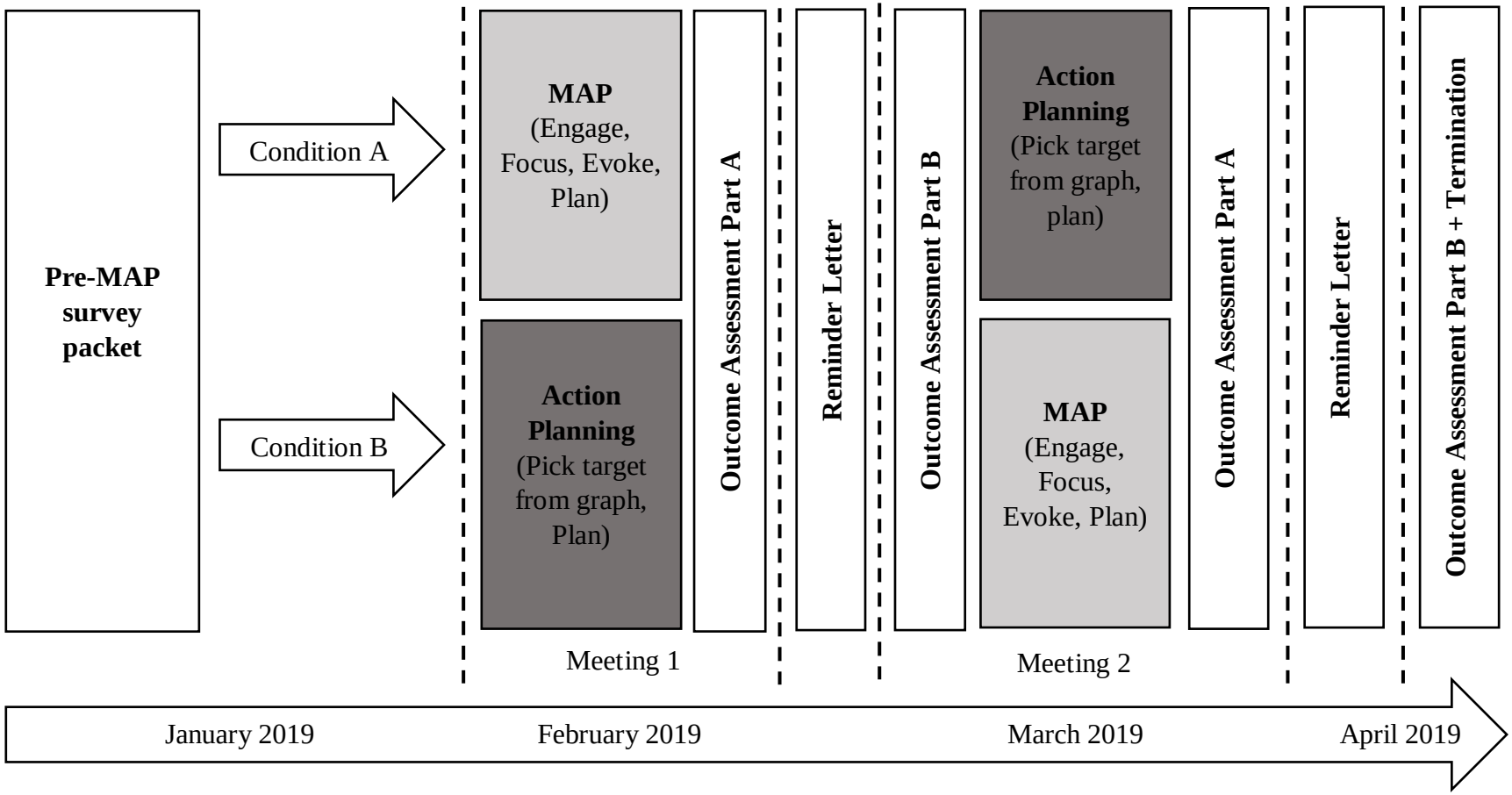

Figure 2. Procedures in Selective Intervention

Table 11

Descriptive Statistics of Motivational Interviewing Treatment Integrity (MITI) Scores in Pilot

Participant	Meeting	Cultivate Change Talk	Softening Sustain Talk	Partnership	Empathy	Technical Global	Relational Global	Percentage of Complex to Simple Reflections	Reflection-to-Question Ratio
1	MAP	4	3	5	5	3.5	5.0	0.40	1.25
	AP	3	3	3	3	3.0	3.0	0.23	0.38
2	MAP	4	4	3	4	4.0	3.5	0.88	1.20
	AP	3	3	3	3	3.0	3.0	0.29	0.63

Note. For condition, 1 = MAP to AP, 2 = AP to MAP. For cultivating change talk, softening sustain talk, partnership, and empathy, scale from 1 = *Low* to 5 = *High* was used. Details on response options were included as Appendix P. For technical global, a score of 3 is considered fair, 4 is good; for relational global, a score of 3.5 is fair, 4 is good; for percentage of complex to simple reflection, 40% is fair, 50% is good; for reflection-to-question ratio, 1:1 is fair, 2:1 is good. Adapted from Moyers, T.B., Manuel, J.K., & Ernst, D. (2014). *Motivational Interviewing Integrity Coding Manual 4.2.* Unpublished manual.

As shown on Table 11, the author received higher MITI scores during MAP meetings, except for scoring the same score on level of partnership for participant 2. To further distinguish the level of MI spirit and techniques used in MAP compared to AP meetings, the MI expert suggested several strategies, including (a) increase use of complex reflections during MAP meetings, (b) use more open-ended questions when asking about barriers towards goal completion during MAP meetings, (c) use more neutral responses (e.g., okay) and evaluative praise (e.g., that's awesome) during AP meetings, and (d) always start a MAP meeting with a question about student's value, no matter the order of the meeting (first or second). The author practiced incorporating these strategies with a third pilot participant, then proceeded to meet with actual participants at the high school.

In addition to gaining practice in minimizing use of MI spirit and technique during AP meetings, the author also gained feedback on the appropriateness of study procedures (e.g., when and how to explain to participants regarding the two conditions they will experience in this study) through the pilot study. Based on recommendations from the pilot, an exit interview was added to the procedures to gain more qualitative feedback from participants, as suggested by the MI expert. Furthermore, the author made conditions (MAP or AP) blind to the MI expert to eliminate biases during MITI coding. In terms of study materials, the author also (a) fixed clerical errors on the student-report outcome measure form, (b) added qualitative questions on coach's feedback form (e.g., "What are some challenges in this meeting?"), (c) made it optional for students to look at their personalized graph again during meeting 2, and (d) revised the fidelity forms to reflect the changes made to MAP or AP meeting protocol (e.g., making it optional for all students to look at personalized graph during meeting 2, adding more questions related to students' values at the beginning of MAP meeting 2, etc.).

The pilot participants also provided some qualitative feedback, which helped refine the current study. For example, pilot participant 1 shared that her prior exposure to MAP made it easy for her to predict questions in meetings and suggested the author to conduct another pilot with an individual with no prior exposure to MAP. The author took her suggestion and recruited the third pilot participant. Pilot participant 2 suggested that students might need a reminder of the definitions of character strengths if they are receiving MAP during their second meeting. The author kept that in mind during study implementation. Other than those two suggestions, all three pilot participants conveyed that the study was well designed, in particular the materials were easy to understand, the flow was smooth, the questions were clear, and they felt comfortable during meetings.

In summary, the pilot study provided useful information to further refine the procedures of the current study and to increase the level of control the author had over her use of MI skills, which is important to differentiate MAP and AP meetings. Qualitative feedback from pilot participants contributed to further improvement of study procedures.

Overview of Intervention Materials

MAP protocol. The MAP protocol (Appendix E) is based on the original MAP meeting 1 protocol developed and piloted by the research team in line with the larger project. The literature review in Chapter II provides more details on the development and characteristics of the original MAP protocols. In the current study, the author made minor adjustments to the original MAP meeting 1 to ensure that it can be used in both first and second meeting with students. Specifically, language to re-introduce coach, re-orient students to the graph, review progress in meeting 2, and ensure students make another action plan in meeting 2 were added. As in the original version, the protocol follows the four processes of MI, namely engaging, focusing, evoking, and planning. The goal of the MAP protocol is to guide the author in adhering to the MI spirit and techniques during implementation. The MAP meeting protocol is attached as Appendix E.

Action Planning (AP) protocol. The AP protocol (attached as Appendix F) jumps straight into action planning after orienting students to the coach, meeting, and graph. This protocol does not adhere to the spirit of MI and the author minimized usage of MI techniques during implementation. Although the focus of AP meeting is to conduct the action planning process with participants, some other elements in the other stages are included to provide context for the intervention (e.g., introducing the coach and purpose of meeting, orienting student to their

graph, picking a target goal, etc.). Table 12 further demonstrates the differences between MAP and Action Planning protocol.

Base and student graph. The base and student graphs that were used in this study are the same as in the original implementation of the selective intervention (O'Brennan et al., 2019). They were used in meetings as a visual tool to provide performance feedback to participants. It also helped participants decide which target to pick for action planning. A sample base and student graph are provided in Appendices A and D.

Student success planning guide. The student success planning guides in this study was slightly modified from the originals. It is a visual tool to help the author guide participants through the meetings. The AP meetings omit page 3 of the meeting 1 planning guide and page 2 of the meeting 2 planning guide (i.e., skipped the part where the coach reviews students' values, strengths, and goals). In contrast, the author utilized the complete planning guide during MAP meetings. Appendices G and H contain blank Meeting 1 and 2 student success planning guides. The main differences between the two guides are reflected on the agenda on the front page.

Reminder letter. The reminder letter in this study is the same as the original. It reminded students of their action plan and urge them to complete the steps to reach self-determined goal. A sample letter is provided in Appendix B.

Outcome Measures

Importance of and confidence to change. In consultation with committee members, which include researchers with expertise in MI, the author developed three items to measure participants' perceived *importance* to change and another three items to tap participants' *confidence* to change. These two elements align with the theoretical underlying of MI regarding why and how individuals make changes (i.e., one manages to change when one feels that the

change is important and is confident that one could make the change; Miller & Rollnick, 2012). Although these items have not been piloted before, the construct that the items attempt to measure is straightforward. In other words, the items should be able to capture participants' perceived importance of and confidence to change accurately. In this study (N = 20), the importance of change scale yielded low to moderate internal reliability (α = 0.55 for MAP meetings; α = 0.44 for AP meetings). The confidence to change yielded higher internal reliability (α = 0.70 for MAP meetings; α = 0.81 for AP meetings). The scale for this measure ranges from 1 to 5 (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree nor Disagree*, 4 = *Agree*, 5 = *Strongly Agree*). The items are listed in Table 13. A higher total score on this scale indicates higher level of importance of and confidence to change. The measure was included in outcome assessments (Appendix K).

Therapeutic alliance. This study utilized two sources of therapeutic alliance. First, a slightly modified version of the Therapeutic Alliance Quality Scale (TAQS; Bickman et al., 2010) was used to measure therapeutic alliance from the youth participants' perspective. The TAQS has been widely used to measure the working relationship between youth (11 to 18 years) and clinician in one-on-one counseling session. Specifically, 2 items measure the bond between clinician and youth; and 3 items measure the level of agreement between clinician and youth on tasks and goal of therapy. In total, it is a 5-item student self-report survey on a 5-point scale (1 = *Not at all*, 2 = *Only a little*, 3 = *Somewhat*, 4 = *Quite a bit*, 5 = *Totally*). A sample item is "Did this meeting head in the direction you wanted?" As part of the Peabody Treatment Progress Battery (PTPB), this scale had undergone rigorous psychometric testing and has been shown to be reliable and valid across a large sample of youth (N = 679) who were receiving home-based mental health services (Riemer et al., 2012). In addition, the items included in this study were

Table 12

Differences between MAP and AP Meetings

Step	MAP Meeting	AP Meeting
Step 1: Engage	• Introduction/Re-introduction to coach and meeting purpose. • *Meeting 2 only*: Review progress towards goal • Review values, strengths, hopes, and goals for the future. • Summarize how student's background fits with ACE targets	• Introduction/Re-introduction to coach and meeting purpose. • *Meeting 2 only*: Review progress towards goal
Step 2: Focus	• Elicit student knowledge of areas related to academic and emotional success. • Orient/re-orient student to norm-referenced feedback graph and review individualized graph with student. • Develop discrepancy between student's weaknesses and comparison groups and/or personal goals. • Agenda map and prioritize area(s) of change	• Orient/Re-orient student to norm-referenced feedback graph and review individualized graph with student. • Agenda map and prioritize area(s) of change.
Step 3: Evoke	• Pose evocative questions that elicit change talk • Reinforce any change talk with OARS.	• N/A [Skip this step entirely]
Step 4: Plan	• Collaboratively brainstorm strategies for meeting goals using Problem-Solving Process in Action form. • Create an action plan that specifies action steps, supports needed, and a timeline. • Increase hope and confidence in making change.	• Collaboratively brainstorm strategies for meeting goals using Problem-Solving Process in Action form. • Create an action plan that specifies action steps, supports needed, and a timeline

Note. ACE = Advancing Coping and Engagement, OARS = Open-ended questions, Affirmation, Reflection, Summary.

Table 13

Items on Importance of and Confidence to Change Measure

	Items
Importance of change	1. I feel the target behavior my coach and I discussed today is important. 2. The target behavior my coach and I discussed today became more important as the meeting went along. 3. I am ready to make change in the target behavior discussed during today's meeting.
Confidence to change	4. Because of this meeting, I feel confident that I will meet my goal. 5. I know I can take the steps necessary to reach my goal. 6. I am confident that my plan will help me overcome barriers to reach my goal.

piloted with students in accelerated curricula in conjunction with the implementation of the original MAP intervention during Year 3 of the project. A total of 120 students in accelerated curricula completed the items after MAP meeting 1, and 114 of these students completed the items after meeting 2. After meeting 1, the 5-item composite mean score ranged from 4.43 to 4.79 (*SD* = 0.45 – 0.72); after meeting 2, the mean composite ranged from 4.45 to 4.81 (*SD* = 0.44 – 0.73). In the current study (*N* = 20), the TAQS for participants yielded sufficient internal reliability (α = 0.67 for MAP meetings; α = 0.68 for AP meetings). To interpret this scale, higher total score indicates higher level of therapeutic alliance. The TAQS for participants is included in outcome assessment (Appendix K) with other outcome and acceptability items.

The second source of therapeutic alliance rating for this study is the interventionist (coach). This study collected the interventionist's rating of therapeutic alliance through a modified version of the Therapeutic Alliance Quality Rating (TAQR; Bickman et al., 2010). Specifically, one item measured the interventionist's perception of the level of therapeutic alliance she shares with participants ("In this meeting, how would you describe your relationship with this student?") and another item measures how the interventionist thinks the participants would rate their respective alliance with her ("In this meeting, how do you think the student will

rate your relationship with him/her?"). These two items are measured on a 5-point scale (*very poor*, *poor*, *satisfactory*, *good*, and *excellent*) and adopted from the TAQR, which was developed alongside the TAQS, thus has also been widely tested with practitioners who worked with youth in clinical settings. In addition to those two items, this study included four more items to measure interventionist's perception on therapeutic alliance. These items were developed and piloted by the research team working on the larger grant (R305A150543) associated with this study (O'Brennan et al., 2019). The additional items were rated on a 5-point scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Disagree nor Agree,* 4 = *Agree*, 5 = *Strongly Agree*). During Year 3 of the larger grant, a total of 121 students in accelerated curricula completed the items after MAP meeting 1, and 114 of these students completed the items after meeting 2. After meeting 1, the 6-item composite mean score ranged from 3.17 to 5.00 (M = 4.39; SD = 0.54); after meeting 2, the 7-item composite mean score ranged from 2.86 to 5.00 (M = 4.39; SD = 0.55). In the current study (N = 20), the TAQS for participants yielded high internal reliability (α = 0.97 for MAP meetings; α = 0.92 for AP meetings). To interpret this scale, higher total score indicates higher level of therapeutic alliance. All therapeutic alliance items are included in Appendix O. It is important to note that due to potential biases (i.e., interventionist not blind to the condition that participants are in), reliability of interventionist-rated therapeutic alliance should be viewed with caution.

Collecting rating of therapeutic alliance from two sources (participants and coaches) permits examination of alliance ratings from multiple sources. In terms of which source should be prioritized, this study put most emphasis on participant-rated therapeutic alliance because client-rated therapeutic alliance has shown to be most predictive of therapy outcomes (Lambert & Barley, 2001).

Goal attainment. To measure goal attainment, this study utilized four indicators of progress. The first indicator used in this study is the *Goal Attainment Scaling* (GAS; Kiresuk & Sherman, 1968), which was developed as an alternative evaluative technique to measure progress on individualized goals more than 40 years ago. The GAS was first applied in mental health settings (Kiresuk & Sherman, 1968) and has since been considered appropriate to measure highly diverse outcomes or goals in treatment across settings, including schools (Ruble, Dalrymple, & McGrew, 2010). The GAS scale was rated on a 5-point scale (+2 = *much more than expected*, 1 = *more than expected*, 0 = *expected level of progress*, -1 = *less than expected*, -2 = *much less than expected*). In this study, participants first developed a goal relevant to themselves in a meeting, then determined how much progress they have made in the following meeting. This procedure is a shorter version of the original procedure recommended by Kiresuk, Smith, and Cardillo (2014), which has seven steps. The author simplified the procedure after consulting with committee members to avoid adding more intervention elements in meetings, which might complicate the distinction between MAP and AP meetings.

The second and third indicators are 5-point Likert items that measured participants' perception on *overall progress towards self-determined goal* and *changes in behavior after meeting*. The items are "I made progress on the goal I identified with my coach" and "I made changes in my behavior based on the last meeting." Participants rated the item on a scale from 1 to 5 (1 = *Not at all*, 2 = *Only a little*, 3 = *Somewhat*, 4 = *Quite a bit*, 5 = *Totally*). These two items were also piloted with 114 students in accelerated curricula in Year 3 of the larger IES grant. Table 14 details the frequency distributions, means, and stand deviations of the two goal attainment items from that study, data collected at meeting 2 which reflects progress toward goal since meeting 1.

Table 14

Descriptive Statistics of Progress towards Goal and Change in Behavior Items from Pilot

	n	*M*	*SD*	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
Items						Percent		
I made progress on the goal I identified with my coach.	114	4.46	0.69	0.0	1.8	6.1	35.1	57.0
I made changes in my behavior based on the first meeting.	114	4.18	0.72	0.0	3.5	7.9	53.5	35.1

Note. 1 = *Not at all*, 2 = *Only a little*, 3 = *Somewhat*, 4 = *Quite a bit*, 5 = *Totally.*

The fourth and last indicator of goal attainment is the *percentage of action steps completed*. The author (coach) first reviewed participants' self-determined goal and action plan as developed in the earlier meeting, then asked participants to determine if he or she has made "no progress", "some progress", or "completed" each step on the action plan. A score of 0 is assigned if participant had made "no progress", a score of 1 is assigned for some "progress", and a score of 2 is assigned for "completed". The number of steps for each action plan range from 1 to 4. To illustrate, if a participant had a score of 4 out of total possible score of 6 (i.e., 3 steps in action plan), he or she is considered to have made 67% (4/6 x 100%) towards his or her goal. A higher percentage indicates larger progress made towards self-determined goal since the individual coaching session. In Year 3 of the larger IES grant, the research team piloted this method of measuring goal attainment (from meeting 1 to 2) with 114 students in accelerated curricula and found that 2% of students completed 0% of the plan, 7% completed 1 to 25% of the plan, 24% completed 26 to 50% of the plan, 25% completed 51 to 75% of the plan, 18% completed 76 to 99% of the plan, and 25% completed 100% of the plan. All indicators of goal attainment were included in the progress towards goal form, attached as Appendix C.

Acceptability Measures

In order to gauge the acceptability of the MAP and AP meetings, this study utilized both quantitative and qualitative measures to capture participants' sentiments.

Quantitative measures. Immediately after each meeting, participants completed a 1-page survey (Appendix K) that includes the acceptability, therapeutic alliance, and goal attainment items. This study also included 4 items on acceptability that were rated on a scale from 1 to 5 (1 = *Not at all*, 2 = *Only a little*, 3 = *Somewhat*, 4 = *Quite a bit*, 5 = *Totally*). The items are "I would recommend the meeting to other students.", "I felt comfortable during this meeting.", "The materials presented were helpful.", and "The process used to develop the action plan was helpful." A higher total score on these items indicate higher level of acceptability or satisfaction of meeting. Two of the four items were piloted with 112-120 students in accelerated curricula in conjunction with the larger IES study. Table 15 displays the means, standard deviations, and frequency distributions yielded from each item, using data from 2017-18. The other two items were newly constructed in consultation with dissertation committee members and were expected to capture participants' acceptability reliably as the purpose of the items should be clear to participants. Case in point, the 4 acceptability items yielded high internal reliability in this study ($N = 20$; $\alpha = 0.78$ for MAP meetings; $\alpha = 0.73$ for AP meetings).

Qualitative measures. In addition to the four quantitative items on acceptability, participants also had the opportunity to provide written and verbal feedback. Specifically, participants were asked to provide written responses to open-ended questions after the first two meetings. The open-ended questions provided a space for participants to voice any additional comments not captured through quantitative measure. It also generated helpful information that

Table 15

Descriptive Statistics of Acceptability Items from Pilot

Items	*n*	*M*	*SD*	Strongly Disagree	Disagree	Neither Agree Nor Disagree	Agree	Strongly Agree
MAP Meeting One						Percent		
I would recommend the meeting to other students.	120	4.49	0.65	0.0	0.0	8.3	34.2	57.5
I felt comfortable during this meeting.	120	4.61	0.61	0.8	0.0	1.7	32.5	65.0
MAP Meeting Two						Percent		
I would recommend the meeting to other students.	112	4.30	0.71	1.0	0.0	8.9	48.2	41.9
I felt comfortable during this meeting.	114	4.65	0.58	0.0	0.9	2.6	27.2	69.3

Note. 1 = *Not at all,* 2 = *Only a little,* 3 = *Somewhat,* 4 = *Quite a bit,* 5 = *Totally.*

supplement the data generated from quantitative methods. The open-ended questions were provided right after the quantitative measures in outcome assessment (attached as Appendix K). The open-ended questions are "What part of the meeting did you find most interesting or useful?," "*After meeting 1 only:* What are the good and bad parts of the meeting?," "*After meeting 2 only:* Can you name some differences *between the extra support you experienced today compared to our last meeting*?," and "Additional comments and suggestions."

In addition to the written responses, the author also conducted a semi-structured exit interview with each participant during the third meeting. The interview questions were "Please describe some differences between the two meetings we had?," "How comfortable do you feel during the first meeting? How about during the second meeting?," and "Anything else about your experiences during the two meetings that you would like to share?" The coach asked follow-up questions as appropriate. The duration of the interview ranged from 6 to 15 minutes.

Overview of Analyses

Quantitative analysis. The majority of this study is quantitative in nature, in which various statistical methods were used to answer the research questions.

Descriptive statistics. The author conducted descriptive statistics analyses through SAS 9.4 statistical software (SAS Institute, 2013) to summarize various aspects of the data collected throughout this study. Specifically, the author calculated the distribution of scores, medians, means, and standard deviations for outcomes (i.e., perceived importance of and confidence to change, therapeutic alliance, goal attainment) and acceptability items at various time points (i.e., after meeting 1, before meeting 2, after meeting 2, and before termination). In addition, the author also compared the average Motivational Interviewing Treatment Integrity (MITI; Moyers et al., 2014) scores between MAP and AP meetings. All descriptive statistics are reported in detail in Chapter IV.

Research question 1. Does participation in the MAP intervention results in better outcomes compared to participation in the Action Planning intervention among at-risk 9th grade students in accelerated curricula? Outcomes include (a) importance of change, (b) confidence to change, (c) therapeutic alliance, and (d) goal attainment.

Research question 2. Does participation in the MAP intervention result in better *acceptability* compared to participation in the Action Planning intervention (planning only) among at-risk 9th grade students in accelerated curricula?

To answer research questions 1 and 2, SAS 9.4 statistical software (SAS Institute, 2013) was used to conduct Wilcoxon Signed-Rank Tests. This test was chosen because it is a non-parametric test that does not assume a normal distribution or equal variances. It is suitable for the small sample size of this study. Essentially, the tests compared two sets of scores that came from the same participants and revealed any differences. Each participant acted as his or her own

control. The condition (MAP vs. AP meeting first) is the independent variable, whereas the outcome and acceptability measures are the dependent variables. All results are described in detail in Chapter IV.

Qualitative analysis. Student participant written and verbal responses to acceptability of meetings provided more context to answer research question 2. After the data were collected, the author transcribed participants' responses into a Word document. Then, she read the responses several times, highlighted repetitive keywords, and immersed herself in the data. Finally, the author utilized the constant comparative method to identify key themes from the qualitative data (Strauss & Corbin, 1990). All qualitative findings are reported in Chapter IV.

Ethical Considerations

Permission to conduct the larger study was secured from the USF's IRB (amendment 19 to eIRB Pro00022787; see Appendix U) and the research offices from the school district. The amendment specified the procedures to be used with 20 students. Parent consent, student assent forms, and recruitment letter (Appendices L, M, and N) for this study were approved for use. Several additional precautions were taken to protect the rights and confidentiality of the participants in this study. For example, the USF's IRB and the author's committee members reviewed the intervention protocols and procedures to ensure all interactions with participants presented minimal risk or no harm. A pilot study was conducted in which the author received feedback on the study procedures and her counseling skills. Study participants were allowed to withdraw at any time. The consent and assent forms include contact information of the USF researchers in case participants or parents had any concerns or questions. In order to protect participants' identity and confidentiality, participants were assigned code numbers. The sessions were audio recorded and uploaded to a secure university drive (p-drive, which the university

transitioned to Box). Only approved project staff are allowed to access the audio files, and no participants' names are on specified within the files. All physical data collected (e.g., paper and pencil surveys) are stored in a locked room and all electronic data entered are kept on the p-drive/Box for security.

Chapter IV: Results

The first part of this chapter reviews data screening and results from descriptive analyses to demonstrate the validity of the data set and describes relationships between variables. Then, this chapter presents analyses of data to answer the research questions of this study. For research questions 1 and 2, the results of Wilcoxon Signed-Rank Tests are described. Lastly, this chapter presents themes generated from qualitative data analyses and explains how these themes provide context for the findings of this study.

Data Screening

Data entry accuracy. The author first entered all data collected on paper into an Excel spreadsheet, then created a database in SAS 9.4 statistical software (SAS Institute, 2013). Once the database was established in SAS, the author read aloud each data line in the Excel sheet, and a volunteer research assistant ensured that the data matched those in the SAS database. No errors were found through this check. The author further evaluated data entry accuracy by manually checking 100% of all measures used in study. Specifically, the author made sure that the data collected on papers matched the data in the SAS database. In SAS, the author also calculated the minimum and maximum values of each variable to check for impossible values. No values were found to be outside of the minimum or maximum range. In summary, the data entry error rate was 0%, with an accuracy rate of 100%. It is also noteworthy that there is no missing data in this study.

Differentiating MAP and AP Meetings

The conditions in this study (MAP and AP) were differentiated with two methods.

Theoretical differences in intervention content. The author designed two different intervention protocols with the support of her committee members. Details on the protocol can be found in Chapter III. The author adhered to the protocol strictly to ensure that participants experience two different conditions throughout the study. Fidelity scores are reported later in this chapter.

Analysis of MITI scores from 40 meetings. The author incorporated more MI skills and spirit during MAP compared to AP meetings. An expert in MI (i.e., one of the author's dissertation committee member who specializes in MI) used the MITI coding system to evaluate the author's MI proficiency in all meetings. Wilcoxon Signed Rank test revealed significant differences in *cultivating change talk* (S = 82.5, $N = 20$, $p < .0001$) and *softening sustain talk* (S = 88, $N = 20$, $p < .0001$) between MAP and AP meetings, such that the coach cultivated more change talk and softened sustain talk more effectively during MAP compared to AP meetings. Wilcoxon Signed Rank tests also demonstrated significant differences in *partnership* (S = 60, $N = 20$, $p < .0001$), *empathy* (S = 54.5, $N = 20$, $p = 0.003$), *technical global* (S = 91, $N = 20$, $p < .0001$), *relational global* (S = 73.5, $N = 20$, $p < .0001$), *percent of complex reflection* (S = 105, $N = 20$, $p < .0001$), and *reflection to question ratio* (S = 74, $N = 20$, $p = .004$) scores. These results suggest that the coach formed stronger partnership with participants, displayed higher empathy, demonstrated stronger technical skills, built stronger overall relationships, used more complex reflections compared to simple reflections, and used less questions compared to reflections during MAP meetings. In other words, the author demonstrated significantly higher

quality of MI during MAP compared to AP meetings. Descriptive statistics on MITI scores are reported in the next section.

Descriptive Statistics

Descriptive statistics were computed via SAS for all variables, including the three outcome variables (importance of and confidence to change, therapeutic alliance, and goal attainment), student acceptability, and the control variable (level of MI quality). There are two sources of therapeutic alliance (student and coach) and four indicators of goal attainment (Goal Attainment Scaling, perceived progress towards goal, perceived change in behavior, and percentage of action steps completed).

Overall, participants reported high levels of importance of change, as evidenced by the high means and medians for MAP (*M* = 4.68, *Med* = 4.67) and AP (*M* = 4.50, *Med* = 4.33) meetings. In fact, no participant responded to any items with a number lower than 4 on a scale that range from 1 to 5 (*strongly disagree* to *strongly agree*). The same observations were made for confidence to change, where means and medians were high for MAP (*M* = 4.38, *Med* = 4.33) and AP (*M* = 4.35, *Med* = 4.33) meetings. However, a small number of participants (5 to 10%) responded to some items with a 2 or 3 out of the 5-point Likert scale for this variable. On the other hand, participants also reported high therapeutic alliance across MAP (*M* = 4.70, *Med* = 4.80) and AP (*M* = 4.66, *Med* = 4.70) meetings on a scale from 1 = *not at all* to 5 = *totally*, with no 1 or 2 responses. In contrast, the coach reported slightly higher therapeutic alliance for MAP (*M* = 4.47, *Med* = 5.00) compared to AP (*M* = 3.18, *Med* = 3.00) meetings. Tables 16 to 18 describe the mean, median, standard deviation, and score distributions of these variables and their items.

Table 16

Descriptive Statistics of Importance of and Confidence to Change

	MAP									*AP*								
	α	*M*	*Med*	*SD*	*Percent*					*α*	*M*	*Med*	*SD*	*Percent*				
Scales and Items					1	2	3	4	5					1	2	3	4	5
Importance of Change	0.55	4.68	4.67	0.33						0.44	4.50	4.33	0.12					
1. I feel the target behavior my coach and I discussed today is important.		4.75	5.00	0.44	0	0	0	25	75		4.55	5.00	0.51	0	0	0	45	55
2. The target behavior my coach and I discussed today became more important as the meeting went along.		4.80	5.00	0.41	0	0	0	20	80		4.50	4.50	0.51	0	0	0	50	50
3. I am ready to make change in the target behavior discussed during today's meeting.		4.50	4.50	0.51	0	0	0	50	50		4.45	4.00	0.51	0	0	0	55	45
Confidence to Change	0.70	4.38	4.33	0.49						0.81	4.35	4.33	0.62					
1. Because of this meeting, I feel confident that I will meet my goal.		4.30	4.00	0.66	0	0	10	50	40		4.55	5.00	0.69	0	0	10	25	65
2. I know I can take the steps necessary to reach my goal.		4.30	4.00	0.66	0	0	10	50	40		4.35	4.00	0.67	0	0	10	45	45
3. I am confident that my plan will help me overcome barriers to reach my goal.		4.55	5.00	0.51	0	0	0	45	55		4.15	4.00	0.81	0	5	10	50	35

Note. MAP = Motivational, Assessment, and Planning, AP = Action Planning; 1=*Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree Nor Disagree*, 4 = *Agree* 5=*Strongly Agree.*

Table 17

Descriptive Statistics of Student-Report Therapeutic Alliance

	MAP									*AP*								
	α	*M*	*Med*	*SD*	*Percent*					*α*	*M*	*Med*	*SD*	*Percent*				
Scale and Items					1	2	3	4	5					1	2	3	4	5
Student-report Therapeutic Alliance	0.67	4.70	4.80	0.36						0.68	4.66	4.70	0.34					
1. Did this meeting head in the direction that you wanted?		4.65	5.00	0.59	0	0	5	25	70		4.50	5.00	0.69	0	0	10	30	60
2. Did you understand the things your coach said in this meeting?		4.80	5.00	0.41	0	0	0	20	80		4.85	5.00	0.37	0	0	0	15	85
3. Did you and your coach work on problems together in this meeting?		4.90	5.00	0.31	0	0	0	10	90		4.80	5.00	0.41	0	0	0	20	80
4. In this meeting, do you feel that your coach will stick with you no matter how you behaved?		4.70	5.00	0.47	0	0	0	30	70		4.75	5.00	0.44	0	0	5	25	75
5. In this meeting, did you feel that your coach understood what it feels like to be you?		4.45	5.00	0.76	0	0	15	25	60		4.40	4.00	0.60	0	0	5	50	45

Note. MAP = Motivational, Assessment, and Planning, AP = Action Planning; 1 = *Not at all*, 2 = *Only a little*, 3 = *Somewhat*, 4 = *Quite a bit*, 5 = *Totally*.

Table 18

Descriptive Statistics of Coach-Report Therapeutic Alliance

	MAP									*AP*								
	α	*M*	*Med*	*SD*	*Percent*					*α*	*M*	*Med*	*SD*	*Percent*				
Scale and Items					1	2	3	4	5					1	2	3	4	5
Coach-report Therapeutic Alliance	0.97	4.67	5.00	0.47						0.92	3.18	3.00	0.57					
1. In this meeting, how would you describe your relationship with this student?		4.65	5.00	0.49	0	0	0	35	65		3.30	3.00	0.57	0	0	75	20	5
2. In this meeting, how do you think the student will rate your relationship with him/her?		4.65	5.00	0.49	0	0	0	35	65		3.25	3.00	0.55	0	0	80	15	5
3. The student seemed engaged during this meeting.		4.70	5.00	0.47	0	0	0	30	70		3.30	3.00	0.73	0	10	55	30	5
4. The student and I had a positive working alliance during this meeting.		4.65	5.00	0.59	0	0	5	25	70		3.00	3.00	0.73	0	20	65	10	5
5. The student seems likely to make a positive change in a target discussed during today's meeting.		4.65	5.00	0.49	0	0	0	35	65		3.00	3.00	0.80	0	25	55	15	5
6. I feel the student benefitted from taking part in the meeting.		4.70	5.00	0.47	0	0	0	30	70		3.25	3.00	0.64	0	5	70	20	5

Note. MAP = Motivational, Assessment, and Planning, AP = Action Planning; Item 1 and 2 used the scale of 1 = Very poor, 2 = poor, 3 = satisfactory, 4 = good, 5 = excellent; items 3 to 6 used the scale of 1=*Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree Nor Disagree*, 4 = *Agree* 5=*Strongly Agree.*

As described in Chapter III, there are four indicators of goal attainment. For Goal Attainment Scaling (GAS), the scale ranges from much more than expected (+2), more than expected (+1), expected level of progress (0), less than expected (-1), to much less than expected (-2). The median GAS scores for both MAP and AP meetings were +1, with the highest number of participants choosing +1 for MAP (60%) and AP (45%) meetings (see Table 19).

Table 19

Descriptive Statistics of Goal Attainment Scaling

	MAP				*AP*			
Scale and Items	*M*	*Med*	*SD*	*Percent*	*M*	*Med*	*SD*	*Percent*
Goal Attainment Scale	0.60	1.00	0.75		0.40	1.00	1.05	
Much more than expected (+2)				5				10
More than expected (+1)				60				45
Expected level of progress (0)				25				25
Less than expected (-1)				10				15
Much less than expected (-2)				0				5

Note. MAP = Motivational, Assessment, and Planning, AP = Action Planning.

For student self-report progress towards goal, participants reported scores of 3 and above on a scale from 1 to 5 (*strongly disagree* to *strongly agree*) for both MAP (*M* = 4.10, *Med* = 4.00) and AP (*M* = 4.50, *Med* = 4.50) meetings. For student self-report changes in behavior, participants reported scores above 4 on the same scale for MAP (*M* = 4.40, *Med* = 4.00) and AP (*M* = 4.60, *Med* = 5.00) meetings. The last indicator of goal attainment is percentage of action steps completed, which reflects the extent to which participants completed each step of the action plan they created during the meeting. For each step, a score of 0 is assigned if participant had made "no progress", a score of 1 is assigned for some "progress", and a score of 2 is assigned if the step has been "completed". The number of steps for each action plan range from 1 to 4. If a participant had a score of 4 out of total possible score of 6 (i.e., 3 steps in action plan), he or she will be considered to have attained 67% (4/6 x 100%) of steps towards his or her goal. In this study, participants reported completing the majority of the steps for MAP (*M* = 70%, *Med* =

83%) and AP (*M* = 75%, *Med* = 75%) meetings. Tables 20 and 21 describe the mean, median, standard deviation, and score distributions of these variables.

In terms of acceptability, participants reported high acceptability for MAP (*M* = 4.64, *Med* = 4.75) and AP (*M* = 4.60, *Med* = 4.67) meetings on a scale from 1 = *Strongly Disagree* to 5 = *Strongly Agree*. Table 22 describe the mean, median, standard deviation, and score distributions of these variables and their items.

Last, an expert in MI coded all meetings with the MITI coding system and rated MAP meetings with higher quality of MI compared to AP meetings. The first four indicators of MI quality (cultivating change talk, softening sustain talk, partnership, and empathy) were rated on 1 to 5 Likert scale (1 = *Low* to 5 = *High*). As reported in Table 23, MAP meetings have higher scores on cultivating change talk (*M* = 3.90 vs. *M* = 2.45; S = 82.5, *N* = 20, $p < .0001$), softening sustain talk (*M* = 3.80 vs. *M* = 2.65; S = 88, *N* = 20, $p < .0001$), partnership (*M* = 3.95 vs. *M* = 2.80; S = 60, *N* = 20, $p < .0001$), and empathy (*M* = 4.00 vs. *M* = 3.00; S = 54.5, *N* = 20, $p = 0.003$). Appendix P provides details on how the MI expert choose between score 1 to 5 for each indicator. On technical global, a score of 3 is considered fair whereas 4 is considered good (Moyers et al., 2014). Table 23 shows that MAP meetings have higher mean technical global score that is also considered close to good (*M* = 3.85). In contrast, AP meetings have lower mean technical global score that is not even considered fair (*M* = 2.55). Wilcoxon Signed Rank test revealed a significant difference in technical global score (S = 54.5, *N* = 20, $p = 0.003$).

For relational global, a score of 3.5 is considered fair and a score of 4 is considered good. MAP meetings have a higher mean relational global score (S = 73.5, *N* = 20, $p < .0001$) that is also considered good (*M* = 3.98), whereas AP meetings have lower mean relational global score that is not even considered fair (*M* = 2.90). Next, a score of 40% on percentage of complex to

Table 20

Descriptive Statistics of Perceived Progress towards Goal and Changes in Behavior

	MAP								*AP*							
	M	*Med*	*SD*	*Percent*					*M*	*Med*	*SD*	*Percent*				
Scale and Items				1	2	3	4	5				1	2	3	4	5
Progress towards Goal																
I made progress on the goal I identified with my coach.	4.10	4.00	0.64	0	0	5	75	20	4.50	4.50	0.51	0	0	10	30	60
Changes in Behavior																
I made changes in my behavior based on the last meeting.	4.40	4.00	0.50	0	0	0	60	40	4.60	5.00	0.50	0	0	0	15	85

Note. MAP = Motivational, Assessment, and Planning, AP = Action Planning; 1=*Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree Nor Disagree*, 4 = *Agree* 5=*Strongly Agree.*

Table 21

Descriptive Statistics of Percentage of Action Steps Completed

	MAP							*AP*						
	n	*M*	*Med*	*SD*	*Percent*			*n*	*M*	*Med*	*SD*	*Percent*		
Scales and Items					0	1	2					0	1	2
Percentage of Action Steps Completed		0.70	0.83	0.24					0.75	0.75	0.24			
Step 1	20	1.55	2.00	0.67	10	25	65	20	1.66	2.00	0.49	0	35	65
Step 2	20	1.45	2.00	0.69	10	35	55	20	1.50	2.00	0.61	5	40	55
Step 3	18	1.22	1.00	0.65	11	55	33	20	1.35	2.00	0.81	20	25	55
Step 4	0	.	.	.	.	.	.	2	1.50	1.50	0.71	0	50	50

Note. MAP = Motivational, Assessment, and Planning, AP = Action Planning; For Steps 1 to 4, a score of 0 is assigned if participant had made "no progress", a score of 1 is assigned for some "progress", and a score of 2 is assigned for "completed". The number of steps for each action plan range from 1 to 4. In summary, if a participant had a score of 4 out of total possible score of 6 (i.e., 3 steps in action plan), he or she will be considered to have made 0.67 (4/6 x 100%) towards his or her goal.

Table 22

Descriptive Statistics of Student Acceptability

	MAP									*AP*								
	α	*M*	*Med*	*SD*	*Percent*					*α*	*M*	*Med*	*SD*	*Percent*				
Scales and Items					1	2	3	4	5					1	2	3	4	5
Student Acceptability	0.78	4.64	4.75	0.40						0.73	4.60	4.67	0.41					
1. I would recommend the meeting to other students.		4.70	5.00	0.47	0	0	0	30	70		4.65	5.00	0.49	0	0	0	35	65
2. I felt comfortable during this meeting.		4.65	5.00	0.59	0	0	5	25	70		4.70	5.00	0.57	0	0	5	20	75
3. The materials presented were helpful.		4.70	5.00	0.47	0	0	0	30	70		4.45	4.00	0.51	0	0	0	55	45

Note. MAP = Motivational, Assessment, and Planning, AP = Action Planning; 1=*Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree Nor Disagree*, 4 = *Agree* 5=*Strongly Agree*.

simple reflection is considered fair and 50% is considered good. As shown on table 23, MAP meetings have higher mean percentage of complex to simple reflection (S = 105, *N* = 20, *p* < .0001) that is considered good (*M* = 56%). On the other hand, AP meetings have lower mean percentage of complex to simple reflection that is not even considered fair (*M* = 25%). Finally, a 1:1 reflection-to-question ratio is considered fair and a 2:1 ratio is considered is good. MAP meetings have higher mean ratio (S = 74, *N* = 20, *p* = .004) that is considered fair (*M* = 1.15), whereas AP meetings have lower mean ratio that is not considered fair or good (*M* = 0.90). Table 23 describes the mean, median, standard deviation, and score distributions of these indicators.

Measure reliability. Cronbach's alphas were computed to explore the internal reliability of all variables in this study. According to Nunnally (1978), a reliability of .70 or higher is considered sufficient. Following this guideline, cronbach alpha values were sufficient for confidence to change (MAP α = .70; AP α = .81), coach therapeutic alliance (MAP α = .97; AP α = .92), goal attainment (combining all four indicators; MAP α = .70; AP α = .81), student acceptability (MAP α = .78; AP α = .73), and level of MI quality (global dimensions: MAP α = .85; AP α = .75; proficiency thresholds: MAP α = .77; AP α = .76). On the other hand, Cronbach's alpha values were in the lower range (between .50 and .69) for importance to change (MAP α = .55; AP α = .44) and student therapeutic alliance (MAP α = .67; AP α = .68). As both composites have few items (3 for importance to change; 5 for student therapeutic alliance), a lower Cronbach's alpha value is expected. Cronbach's alphas were included in Tables 18 to 23 as appropriate.

Correlations. Pearson Correlation Coefficients (detailed in tables 24 and 25) were computed in SAS 9.4 statistical software (SAS Institute, 2013) to explore the relationships between all variables for MAP and AP meetings. The relationship between importance of and

Table 23

Descriptive Statistics of Motivational Interviewing Treatment Integrity (MITI) Scores

	MAP									*AP*								
	α	*M*	*Med*	*SD*	*Percent*					*α*	*M*	*Med*	*SD*	*Percent*				
Indicators of MI Quality					1	2	3	4	5					1	2	3	4	5
Global Dimensions	0.85									0.75								
Cultivating Change Talk		3.90	4.00	0.55	0	5	5	85	5		2.45	2.00	0.60	0	60	35	5	0
Softening Sustain Talk		3.80	4.00	0.52	0	5	10	85	0		2.65	3.00	0.59	0	40	55	5	0
Partnership		3.95	4.00	0.60	0	0	20	65	15		2.80	3.00	0.52	0	25	70	5	0
Empathy		4.00	4.00	0.79	0	5	15	75	5		3.00	3.00	0.92	0	35	35	25	5
Proficiency Thresholds	0.77									0.76								
Technical Global		3.85	4.00	0.49							2.55	2.50	0.54					
Relational Global		3.98	4.00	0.64							2.90	2.75	0.60					
Percentage of Complex to Simple Reflections		0.56	0.57	0.12							0.25	0.24	0.10					
Reflections-to-Questions Ratio		1.15	1.13	0.23							0.90	0.94	0.29					

Note. For cultivating change talk, softening sustain talk, partnership, and empathy, scale from 1 = *Low* to 5 = *High* was used. Details on response options were included as Appendix P. For technical global, a score of 3 is considered fair, 4 is good; for relational global, a score of 3.5 is fair, 4 is good; for percentage of complex to simple reflection, 40% is fair, 50% is good; for reflection-to-question ratio, 1:1 is fair, 2:1 is good. Adapted from Moyers, T.B., Manuel, J.K., & Ernst, D. (2014). *Motivational Interviewing Integrity Coding Manual 4.2*. Unpublished manual.

confidence to change is significant (p <.05) for both MAP and AP, with a strong positive relationship (r = .57 and .63, respectively). This means that higher levels of importance of change tend to co-occur with more confidence to change, and vice versa. The relationship between importance to change and student acceptability is also significant (p <.05) for both MAP and AP with strong positive relationships (r = .59, .65), meaning higher levels of importance to change tend to co-occur with greater student acceptability of the meeting. The relationship between importance to change and student-reported therapeutic alliance is also significant (p <.05) for both MAP and AP, with medium to strong positive relationships (r = .49, .61), meaning higher level of importance of change tend to co-occur with higher level of therapeutic alliance. The relationship between importance of change and perceived progress towards goal is significant (p <.05) only for AP, with a medium positive relationship (r = .49). Within the AP condition, higher scores on importance of change tend to co-occur with perceived progress towards goal, and vice versa.

For MAP meetings, the relationship between confidence to change and student-report of therapeutic alliance is significant (p < .05) with a strong positive relationship (r = .61). This suggests that higher confidence to change co-occurs with higher therapeutic alliance. For AP meetings, the relationships between confidence to change and several variables are significant (p < .05), namely with student acceptability, student-report therapeutic alliance, GAS, progress towards goal, and behavior change. The relationships were strong and positive (student acceptability, r = .76; student-report therapeutic alliance, r = .77; GAS, r = .64; progress towards goal, r = .53; behavior change, r = .65).

The relationship between student acceptability and coach-report therapeutic alliance in MAP meetings is significant ($p < .05$) with a strong positive relationship ($r = .66$). This suggests that higher student satisfaction tends to co-occur with coach-reported therapeutic alliance. For AP meetings, the relationships between student satisfaction and several variables are significant ($p < .05$), namely with student-report therapeutic alliance, GAS, progress towards goal, behavior change, and percentage of steps completed. The relationships were strong and positive (student-report therapeutic alliance, $r = .52$; GAS, $r = .55$; progress towards goal, $r = .58$; behavior change, $r = .71$; percentage of steps completed, $r = .58$).

The relationship between student-report therapeutic alliance and behavior change is significant ($p < .05$) for both MAP and AP, with a moderate positive relationship ($r = .45$ and .47). This means that the higher student-report therapeutic alliance tends to co-occur with participants' change in behavior.

The four indicators of goal attainment also shared some significant relationships. For MAP meetings, the relationships between GAS and two other indicators are significant ($p < .05$), namely with progress towards goals and percentage of steps completed. The relationships were strong and positive (progress towards goals, $r = .63$; percentage of steps completed, $r = .59$). For AP meetings, the relationships between GAS and two other indicators are significant ($p < .05$), namely with progress towards goals and behavior change. The relationships were strong and positive (progress towards goals, $r = .78$; behavior change, $r = .52$). In addition, the relationship between progress towards goal and percentage of steps completed is also significant ($p < .05$), but only in AP meetings. The relationship is strong and positive ($r = .54$). Lastly, the relationship between behavior changes and percentage of completed steps is significant ($p < .05$) for both

MAP and AP, with a moderate to strong positive relationship (r = .45, .60). This means that higher perceived change in behavior tend to co-occur with higher percentage of steps completed.

Research question 1. Does participation in the MAP intervention result in better outcomes compared to participation in the AP intervention among at-risk 9th grade students in accelerated curricula? Outcomes include (a) importance of change, (b) confidence to change, (c) therapeutic alliance, and (d) goal attainment.

To answer research question 1, data on each variable were first divided into two groups (those collected after a MAP meeting and those collected after an AP meeting). Then, the means of each group were calculated and the mean differences between groups (MAP → AP vs. AP → MAP) were computed with SAS 9.4 statistical software (SAS Institute, 2013). For goal attainment, the four indicators were measured with different scales, thus their means were first transformed into z-scores, then mean z-scores across the 4 items were computed for each condition (MAP vs. AP), and the mean z-differences between MAP and AP was calculated with SAS. Lastly, Wilcoxon Signed-Rank Tests were calculated to obtain differential statistics. The results for each variable are explored below.

Importance of change. To explore whether participants felt higher importance of change after MAP compared to AP meetings, a Wilcoxon Signed-Rank Test was conducted with SAS using the univariate procedure. The test revealed a significant difference in importance of change between MAP and AP meetings (S = 35.5, N = 20, p = 0.04), with participants reporting significantly higher levels of importance to change after MAP compared to AP meetings. Wilcoxon Signed Rank test revealed no significant order effect (S = -1, N = 20, p = .98). Table 26 shows each participant's score on importance of change after each meeting, sorted by the condition they were in (receive MAP or AP first).

Table 24

Correlations between All Outcome Variables after MAP

	Importance	Confidence	Acceptability	Student TA	Coach TA	GAS	Progress towards Goal	Behavior Change	Percentage of Steps Completed
Importance	—-	.57**	.59**	.49*	.25	.03	.40	.17	.17
Confidence		-	.31	.61**	.03	-.18	-.13	.34	.16
Acceptability			-	.42	.66**	-.03	.15	-.02	.08
Student TA				-	.27	.19	.05	.47*	.42
Coach TA					-	-.05	.12	-.15	.17
GAS						-	.63**	.17	.59**
Progress towards Goal							-	.03	.37
Behavior Change								-	.45*
Percentage of Steps Completed									-

Note. TA = Therapeutic Alliance, GAS = Goal Attainment Scale. *$p < .05$, ** $p < .01$.

Table 25

Correlations between All Outcome Variables after AP

	Importance	Confidence	Acceptability	Student TA	Coach TA	GAS	Progress towards Goal	Behavior Change	Percentage of Steps Completed
Importance	-	.63**	.65**	.61**	-.01	.33	.49*	.40	.41
Confidence		-	.76**	.77**	.23	.64**	.53*	.65**	.29
Acceptability			-	.52*	.25	.55*	.58**	.71**	.58**
Student TA				-	.27	.37	.36	.45*	.21
Coach TA					-	.22	.42	.30	.42
GAS						-	.78**	.52*	.34
Progress towards Goal							-	.41	.54*
Behavior Change								-	.60**
Percentage of Steps Completed									-

Note. TA = Therapeutic Alliance, GAS = Goal Attainment Scale. *$p < .05$, ** $p < .01$.

Table 26

Differences between Importance of Change after MAP vs. AP

Participant	Condition	MAP	AP	Differences (MAP-AP)
3	1	4.33	5.00	-0.67
4	1	4.33	4.67	-0.33
13	1	4.67	5.00	-0.33
11	1	5.00	4.67	0.33
12	1	4.67	4.33	0.33
14	1	5.00	4.67	0.33
15	1	4.67	4.33	0.33
5	1	4.67	4.00	0.67
10	1	5.00	4.33	0.67
18	1	5.00	4.33	0.67
	Condition 1 *M*	**4.73**	**4.53**	**0.20**
17	2	4.67	5.00	-0.33
1	2	4.33	4.33	0.00
6	2	5.00	5.00	0.00
7	2	4.00	4.00	0.00
9	2	4.00	4.00	0.00
16	2	5.00	5.00	0.00
19	2	4.67	4.33	0.33
20	2	4.67	4.33	0.33
2	2	5.00	4.33	0.67
8	2	5.00	4.33	0.67
	Condition 2 *M*	**4.63**	**4.67**	**-0.04**
	Overall *M*	4.68	4.50	0.18
	Overall *Med*	4.67	4.33	
	Overall *SD*	0.33	0.35	

Note. MAP = Motivation, Assessment, and Planning, AP = Action Planning; For condition, 1 = MAP to AP, 2 = AP to MAP. 1=*Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree Nor Disagree*, 4 = *Agree* 5=*Strongly Agree.*

Confidence to change. A Wilcoxon Signed-Rank Test was conducted with SAS using the univariate procedure to explore the differences in confidence to change after MAP compared to AP meetings. The test revealed that the difference in confidence to change between MAP and AP meetings (S = 1, N = 20, p = 0.99) is not significant. Wilcoxon Signed Rank test revealed no significant order effect (S = -7.5, N = 20, p = .35). Table 27 shows each participant's score on confidence to change after each meeting, sorted by whether they received MAP or AP first.

Student-reported therapeutic alliance. To explore whether participants reported higher therapeutic alliance after MAP compared to AP meetings, a Wilcoxon Signed-Rank Test was conducted with SAS using the univariate procedure. The test indicated the difference was not statistically significant (S = 4.5, N = 20, p = 0.64). However, Wilcoxon Signed Rank test revealed a significant difference between student-reported therapeutic alliance scores at two time points (S = -18.5, N = 20, p = .03), which suggests an order effect in which participants reported higher therapeutic alliance after their second meeting, no matter what intervention they received at that meeting. Table 28 shows each participant's score on therapeutic alliance after each meeting, sorted by the condition they were assigned to (receive MAP or AP first).

Coach-reported therapeutic alliance. A Wilcoxon Signed-Rank Test was conducted with SAS using the univariate procedure to discover any differences in coach-reported therapeutic alliance after MAP compared to AP meetings. The test revealed a significant difference (S = 95, N = 20, p < .0001), specifically that the coach reported significantly higher therapeutic alliance during MAP compared to AP meetings. Wilcoxon Signed Rank test revealed no significant order effect (S = -23.5, N = 20, p = .36). Table 29 shows the therapeutic alliance score coach reported after each meeting, sorted by the condition in which participants were assigned to.

Table 27

Differences between Confidence to Change after MAP vs. AP

Participant	Condition	MAP	AP	Differences (MAP-AP)
3	1	4.33	5.00	-0.67
15	1	4.00	4.33	-0.33
5	1	4.00	4.00	0.00
10	1	5.00	5.00	0.00
11	1	5.00	5.00	0.00
12	1	4.00	4.00	0.00
13	1	5.00	5.00	0.00
14	1	4.67	4.67	0.00
18	1	4.33	4.33	0.00
4	1	4.67	4.33	0.33
	Condition 1 *M*	**4.50**	**4.57**	**-0.07**
2	2	4.00	4.67	-0.67
9	2	3.33	3.67	-0.33
1	2	4.33	4.33	0.00
6	2	5.00	5.00	0.00
7	2	3.67	3.67	0.00
16	2	5.00	5.00	0.00
17	2	4.33	4.33	0.00
19	2	4.67	4.33	0.33
20	2	4.33	3.67	0.67
8	2	4.00	2.67	1.33
	Condition 2 *M*	**4.27**	**4.13**	**0.14**
	M	4.38	4.35	0.03
	Med	4.33	4.33	
	SD	0.49	0.62	

Note. MAP = Motivation, Assessment, and Planning, AP = Action Planning; For condition, 1 = MAP to AP, 2 = AP to MAP. 1=*Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree Nor Disagree*, 4 = *Agree* 5=*Strongly Agree.*

Table 28

Differences between Student-Report Therapeutic Alliance after MAP vs. AP

Participant	Condition	MAP	AP	Differences (MAP-AP)
18	1	4.00	4.80	-0.80
5	1	4.40	4.60	-0.20
11	1	4.80	5.00	-0.20
3	1	5.00	5.00	0.00
4	1	5.00	5.00	0.00
10	1	5.00	5.00	0.00
12	1	4.60	4.60	0.00
13	1	5.00	5.00	0.00
14	1	5.00	5.00	0.00
15	1	5.00	5.00	0.00
	Condition 1 *M*	**4.78**	**4.90**	**-0.12**
7	2	4.00	4.20	-0.20
9	2	4.00	4.20	-0.20
1	2	4.40	4.40	0.00
6	2	5.00	5.00	0.00
16	2	4.80	4.80	0.00
17	2	4.60	4.60	0.00
2	2	4.80	4.40	0.40
19	2	4.80	4.40	0.40
8	2	5.00	4.20	0.80
20	2	4.80	4.00	0.80
	Condition 2 *M*	**4.62**	**4.42**	**0.20**
	M	4.70	4.66	0.04
	Med	4.80	4.70	
	SD	0.36	0.34	

Note. MAP = Motivation, Assessment, and Planning, AP = Action Planning; For condition, 1 = MAP to AP, 2 = AP to MAP. 1 = *Not at all*, 2 = *Only a little*, 3 = *Somewhat*, 4 = *Quite a bit*, 5 = *Totally*.

Table 29

Differences between Coach-Report Therapeutic Alliance after MAP vs. AP

Participant	Condition	MAP	AP	Differences (MAP-AP)
18	1	5.00	5.00	0.00
13	1	3.83	3.67	0.17
14	1	4.00	3.33	0.67
5	1	4.00	2.83	1.17
11	1	4.00	2.67	1.33
10	1	5.00	3.50	1.50
15	1	5.00	3.50	1.50
4	1	5.00	3.17	1.83
12	1	4.83	3.00	1.83
3	1	5.00	3.00	2.00
	Condition 1 *M*	**4.57**	**3.37**	**1.20**
2	2	5.00	4.00	1.00
7	2	4.00	3.00	1.00
1	2	4.17	2.67	1.50
19	2	5.00	3.33	1.67
9	2	4.50	2.67	1.83
17	2	5.00	3.17	1.83
6	2	5.00	3.00	2.00
20	2	5.00	2.83	2.17
8	2	5.00	2.67	2.33
16	2	5.00	2.67	2.33
	Condition 2 *M*	**4.77**	**3.00**	**1.77**
	M	4.67	3.18	1.49
	Med	5.00	3.00	
	SD	0.47	0.57	

Note. MAP = Motivation, Assessment, and Planning, AP = Action Planning; For condition, 1 = MAP to AP, 2 = AP to MAP. Two out of the five items used the scale of 1 = Very poor, 2 = poor, 3 = satisfactory, 4 = good, 5 = excellent; the other three items used the scale of 1=*Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree Nor Disagree*, 4 = *Agree* 5=*Strongly Agree*.

Goal attainment. To explore whether participants made more progress in their action plans after MAP compared to AP meetings, a Wilcoxon Signed-Rank Test was conducted with SAS using the univariate procedure. The test was performed on the composite variable that include all four indicators of goal attainment (i.e., GAS, progress towards goal, changes in behavior, and percentage of action steps completed). The test resulted in a non-significant difference (S = -29, N = 20, p = 0.30). Table 30 demonstrate participants' z-scores on the composite variable, sorted by the condition they were in (received MAP or AP first). As there are four indicators of goal attainment, Tables 31 to 34 show each participant's score on each indicator. Wilcoxon Signed Rank tests also revealed that there is a significant difference between participants' perceived progress towards goal (one of the four indicators) at time 1 and 2 (after meeting 1 compared to after meeting 2; S = -18, N = 20, p = .04). This suggests that an order effect occurred, in which participants felt that they have made more progress towards after their second meeting, no matter which intervention they received at that meeting. In contrast, Wilcoxon Signed Rank test revealed no significant order effects for the other three indicators: Goal Attainment Scaling (S = -24, N = 20, p = .06), perceived change in behavior (S = 9, N = 20, p = .29), and percentage of actions steps completed (S = 13.5, N = 20, p = .57).

Research question 2. Does participation in the MAP intervention results in better *acceptability* compared to participation in the Action Planning intervention (planning only) among at-risk 9th grade students in accelerated curricula? To answer research question 2, both quantitative and qualitative data were utilized.

Quantitative analyses. For quantitative analysis, data on student satisfaction were first divided into two groups (those collected after a MAP meeting and those collected after an AP meeting). Then, the means of each group was calculated. Next, the mean differences between

Table 30

Differences between Goal Attainment (Composite) after MAP vs. AP

Participant	Condition	MAP	AP	Differences (MAP-AP)
3	1	0.66	0.65	0.01
12	1	-0.19	-1.28	1.09
15	1	0.47	-0.13	0.60
5	1	-0.88	-0.87	-0.02
13	1	0.19	0.27	-0.08
11	1	0.47	0.83	-0.36
4	1	-1.74	-1.35	-0.39
14	1	0.47	1.18	-0.72
10	1	-0.03	0.89	-0.92
18	1	-0.96	0.89	-1.85
	Condition 1 *M*	**-0.15**	**0.10**	**-0.25**
1	2	-0.73	0.23	-0.96
17	2	-1.11	1.05	-2.16
16	2	-0.71	0.39	-1.09
2	2	0.69	1.05	-0.36
6	2	0.89	0.94	-0.05
20	2	0.23	0.12	0.11
7	2	-0.57	-0.69	0.12
19	2	0.24	-0.18	0.42
9	2	-0.09	-0.69	0.60
8	2	0.07	-0.66	0.73
	Condition 2 *M*	**-0.11**	**0.15**	**-0.26**
	M	-0.13	0.13	-0.26
	Med	0.02	0.25	
	SD	0.71	0.82	

Note. MAP = Motivation, Assessment, and Planning, AP = Action Planning; For condition, 1 = MAP to AP, 2 = AP to MAP.

Table 31

Differences between Goal Attainment Scaling after MAP vs. AP

Participant	Condition	MAP	AP	Differences (MAP-AP)
18	1	-1	1	-2
11	1	1	2	-1
13	1	0	1	-1
14	1	1	2	-1
3	1	1	1	0
4	1	-1	-1	0
5	1	0	0	0
10	1	1	1	0
12	1	0	-1	1
15	1	1	0	1
	Condition 1 *M*	**0.30**	**1.08**	**-0.78**
17	2	0	1	-1
1	2	1	1	0
6	2	1	1	0
16	2	0	0	0
20	2	1	1	0
2	2	2	1	1
7	2	1	0	1
9	2	1	0	1
19	2	1	-1	2
8	2	1	-2	3
	Condition 2 *M*	**0.90**	**0.20**	**0.70**
	M	0.60	0.40	0.20
	Med	1.00	1.00	
	SD	0.75	1.05	

Note. MAP = Motivation, Assessment, and Planning, AP = Action Planning; For condition, 1 = MAP to AP, 2 = AP to MAP. 2 = *much more than expected*, 1 = *more than expected*, 0 = *expected level of progress*, -1 = *less than expected*, -2 = *much less than expected*.

Table 32

Differences between Progress Towards Goal after MAP vs. AP

Participant	Condition	MAP	AP	Differences (MAP-AP)
4	1	2.00	4.00	-2.00
3	1	4.00	5.00	-1.00
10	1	4.00	5.00	-1.00
11	1	4.00	5.00	-1.00
13	1	4.00	5.00	-1.00
14	1	4.00	5.00	-1.00
18	1	4.00	5.00	-1.00
5	1	4.00	4.00	0.00
12	1	4.00	4.00	0.00
15	1	4.00	4.00	0.00
	Condition 1 *M*	**3.80**	**4.60**	**-0.80**
17	2	4.00	5.00	-1.00
1	2	4.00	4.00	0.00
2	2	5.00	5.00	0.00
6	2	5.00	5.00	0.00
7	2	4.00	4.00	0.00
9	2	4.00	4.00	0.00
16	2	4.00	4.00	0.00
19	2	4.00	4.00	0.00
20	2	5.00	5.00	0.00
8	2	5.00	4.00	1.00
	Condition 2 *M*	**4.40**	**4.40**	**0.00**
	M	4.10	4.50	-0.40
	Med	4.00	4.50	
	SD	0.64	0.51	

Note. MAP = Motivation, Assessment, and Planning, AP = Action Planning; For condition, 1 = MAP to AP, 2 = AP to MAP. 1=*Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree Nor Disagree*, 4 = *Agree* 5=*Strongly Agree.*

Table 33

Differences between Changes in Behavior after MAP vs. AP

Participant	Condition	MAP	AP	Differences (MAP-AP)
10	1	4.00	5.00	-1.00
18	1	4.00	5.00	-1.00
3	1	5.00	5.00	0.00
4	1	4.00	4.00	0.00
5	1	4.00	4.00	0.00
11	1	5.00	5.00	0.00
14	1	5.00	5.00	0.00
15	1	5.00	5.00	0.00
12	1	5.00	4.00	1.00
13	1	5.00	4.00	1.00
	Condition 1 *M*	**4.60**	**4.60**	**0.00**
1	2	4.00	5.00	-1.00
2	2	4.00	5.00	-1.00
16	2	4.00	5.00	-1.00
17	2	4.00	5.00	-1.00
6	2	5.00	5.00	0.00
7	2	4.00	4.00	0.00
8	2	4.00	4.00	0.00
9	2	4.00	4.00	0.00
19	2	5.00	5.00	0.00
20	2	4.00	4.00	0.00
	Condition 2 *M*	**4.20**	**4.60**	**-0.40**
	M	4.40	4.60	-0.30
	Med	4.00	5.00	
	SD	0.50	0.50	

Note. MAP = Motivation, Assessment, and Planning, AP = Action Planning; For condition, 1 = MAP to AP, 2 = AP to MAP. 1=*Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree Nor Disagree*, 4 = *Agree* 5=*Strongly Agree.*

Table 34

Differences between Percentage of Action Steps Completed after MAP vs. AP

Participant	Condition	MAP	AP	Differences (MAP-AP)
18	1	0.50	1.00	-0.50
5	1	0.33	0.50	-0.17
10	1	0.83	1.00	-0.17
14	1	0.83	1.00	-0.17
13	1	0.83	0.83	0.00
15	1	0.83	0.83	0.00
4	1	0.50	0.38	0.13
3	1	1.00	0.83	0.17
12	1	0.50	0.33	0.17
11	1	0.83	0.67	0.17
	Condition 1 *M*	**0.70**	**0.72**	**-0.02**
17	2	0.25	1.00	-0.75
8	2	0.67	1.00	-0.33
16	2	0.67	1.00	-0.33
1	2	0.33	0.50	-0.17
2	2	1.00	1.00	0.00
7	2	0.50	0.50	0.00
19	2	0.83	0.83	0.00
6	2	1.00	0.88	0.13
20	2	0.83	0.50	0.33
9	2	1.00	0.50	0.50
	Condition 2 *M*	**0.71**	**0.79**	**-0.08**
	M	0.70	0.75	-0.05
	Med	0.83	0.75	
	SD	0.24	0.24	

Note. MAP = Motivation, Assessment, and Planning, AP = Action Planning; For condition, 1 = MAP to AP, 2 = AP to MAP. A score of 0 is assigned if participant had made "no progress", a score of 1 is assigned for some "progress", and a score of 2 is assigned for "completed". The number of steps for each action plan range from 1 to 4. In summary, if a participant had a score of 4 out of total possible score of 6 (i.e., 3 steps in action plan), he or she will be considered to have made 67% (4/6 x 100%) towards his or her goal.

groups (MAP – AP) were computed with SAS. Lastly, Wilcoxon Signed-Rank Tests were calculated to obtain differential statistics. The test revealed a non-significant difference (S = 14.5, $N = 20$, $p = 0.47$) between student satisfaction after MAP compared to AP meetings. Wilcoxon Signed Rank test also revealed non-significant order effects (S = -2, $N = 20$, $p = .90$). Tables 35 shows each participant's rating, sorted by the whether they received MAP or AP first.

Qualitative analyses. In this study, participants provided written and verbal responses on their perceptions on the acceptability of meetings. To analyze the qualitative data generated from the open-ended questions on feedback form (written responses) and exit interviews (verbal responses), the author utilized the constant-comparative method (Strauss & Corbin, 1990). First, the author typed or transcribed participants' responses into a Word document. Then, she read the responses over and over again while highlighting repetitive keywords. While she immersed herself in the data, she derived key themes and described them below. The one criterion for theme formation is that the sentiment must be voiced by more than one participant.

Written feedback. Participants were asked to provide written responses to open-ended questions after each meeting. The questions were "*What part of the meeting did you find most interesting or useful?," "What are the good and bad parts of the meeting (after first meeting only)?," "Please describe differences between the extra support you experienced today compared to our last meeting (after meeting two only)?," and "Additional comments and suggestions."*

For the first question regarding the most interesting or useful part of meeting, four themes emerged through analyses. Specifically, participants felt that (a) *action planning*, (b) *comparing level of coping and engagement to other students on the graph*, (c) *recognizing weaknesses*, and

Table 35

Differences between Student Satisfaction after MAP vs. AP

Participant	Condition	MAP	AP	Differences (MAP-AP)
13	1	3.75	5.00	-1.25
10	1	4.75	5.00	-0.25
11	1	4.50	4.75	-0.25
3	1	5.00	5.00	0.00
12	1	4.25	4.25	0.00
14	1	5.00	5.00	0.00
15	1	4.75	4.75	0.00
4	1	4.75	4.25	0.50
5	1	4.50	4.00	0.50
18	1	5.00	4.50	0.50
	Condition 1 *M*	**4.63**	**4.63**	**0.00**
1	2	4.25	4.50	-0.25
9	2	4.00	4.25	-0.25
2	2	4.75	4.75	0.00
6	2	5.00	5.00	0.00
16	2	5.00	5.00	0.00
19	2	4.75	4.75	0.00
7	2	4.00	3.75	0.25
20	2	4.75	4.50	0.25
17	2	5.00	4.50	0.50
8	2	5.00	4.00	1.00
	Condition 2 *M*	**4.65**	**4.57**	**0.08**
	M	4.64	4.60	0.04
	Med	4.75	4.67	
	SD	0.40	0.41	

Note. MAP = Motivation, Assessment, and Planning, AP = Action Planning; For condition, 1 = MAP to AP, 2 = AP to MAP. 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neither Agree Nor Disagree*, 4 = *Agree* 5=*Strongly Agree.*

(d) *discussing impacts of previous plan* were the most helpful part of their meetings. To reveal any differences in terms of how participants view MAP compared to AP meetings, the author counted the number of participants who expressed sentiments related to each theme after each meeting. Table 36 provides the full written responses from all participants, sorted into themes and type of meeting. As shown in the table, 10 participants wrote that action planning was the most useful part after completing a MAP meeting, whereas 12 participants expressed the same sentiment after completing an AP meeting. Five participants felt that the part where they were able to review individualized graph was the most helpful after a MAP meeting, while three felt the same way after an AP meeting. Three participants appreciated the opportunity to review their own weaknesses after MAP meeting, and four participants expressed the same thought after an AP meeting. Lastly, one participant shared that discussing the impacts of pervious plan was most helpful after attending a MAP meeting, whereas three participants shared the same opinion after attending an AP meeting. Overall, it seemed like there are roughly the same number of participants writing similar comments after each type of meeting. It is also noteworthy that for some participants, the same theme emerged after each meeting, regarding of MI skill emphasis.

For the second question (good and bad parts of the meeting), the author found five themes. Note that this question is only asked after participants' first meeting. This is because at that time point (after the first meeting), participants have yet to receive the other condition (MAP or AP), thus unable to provide insights on perceived differences between MAP and AP. The author designed this question to at least collect some data on student satisfaction at that time point. Participants shared that some good parts of the meetings include *discussing goals and plans* as well as *feeling supported by coach*. Many also reported *no bad parts*, whereas some felt that *admitting weaknesses* and *being away from class* were not ideal. Similar to the first question,

Table 36

Themes for Most Interesting or Useful Part of Meetings

Action planning is the most useful/interesting part of meetings		
Participant	**MAP (*n* = 10)**	**AP (*n* = 12)**
1	Making the plan because I will be able to use it.	Making a schedule to put more effort into schoolwork.
2	The making a plan part because she has shown me what I can do and improve on.	Making a plan because it helped me decide how to tackle this challenge.
3	Coming up with the action plan.	The part of the meeting I found most useful was coming up and creating the action plan I need to take to reach my goal.
4	Making a plan was very helpful to me because it motivated me to do the things I need to get done.	I liked the part of making a plan, so I know what I have to do and when.
6		When we were talking about ways to stick with positive thinking.
8	Discussing ways to overcome my problem.	Talking about coping strategies for my anxiety.
9	I found it useful to think of new strategies on how to deal with anxiety and stress, instead of me ignoring it.	
10		I found the solutions most interesting and useful.
11		Making the plan was most useful.
13	I found the part about discussing how I could get myself to join Robotics the most interesting.	The part where we came up with a new plan for me becoming less independent and learning different ways to deal with problem.
14	Discussing my strengths, how I compared to other AP students, and discussing how I can overcome this constant struggle of negative thinking.	Talking about my problem and ways to overcome it. I like that my problem was discussed, and I understood.
15	Talking about the smaller goals that I can accomplish to achieve my larger goals.	
16		Being able to figure out how to reach my goal.
18		Putting the options into steps that I can follow through with minimal consequences.
19	Being able to express my goal and making steps to reach it.	Being able to talk about how I can fix my problem.

Table 36 (Continued)

Comparing level of coping and engagement to other students on the graph is the most useful/interesting part of meetings		
Participant	**MAP (*n* = 5)**	**AP (*n* = 3)**
5	The strengths and weaknesses that came out on the graph.	
11	Using and looking at the chart where I was in comparison to other students.	
12	Looking at my results because it really showed me what needed improvement.	
14	Discussing my strengths, how I compared to other AP students, and discussing how I can overcome this constant struggle of negative thinking.	Talking about my problem and ways to overcome it. I like that my problem was discussed, and I understood.
16		Seeing my chart really showed me what I need to work on.
18	The part where we talked about my score compared to others.	
20		The part where my coach showed me my results on the test I did back then.
Recognizing weaknesses is the most useful/interesting part of meetings		
Participant	**MAP (*n* = 3)**	**AP (*n* = 4)**
5		Vocalizing what I need to do.
7	We went into a subject I didn't realize I had a problem in.	The part where we talked about how I was trying less in school.
9	I found it useful to think of new strategies on how to deal with anxiety and stress, instead of me ignoring it.	I was interested in the fact that I've addressed something I've been ignoring.
10	When we talked about my ineffective coping styles because it helped me understand why I need to improve.	
14		Talking about my problem and ways to overcome it. I like that my problem was discussed, and I understood.
Discussing impacts of previous plan is the most useful/interesting part of meetings		
Participant	**MAP (*n* =1)**	**AP (*n* = 3)**
6	When we talked about how much has changed in my life after I committed to my goals	.
12		Discovering my talent and opening up to something new.
15		Revisiting the past meeting made me feel confident about my progress towards my goal.

Note. Some written responses relate to more than one theme, and the author included those responses more than once in this table.

the author counted the number of participants who expressed sentiments related to each theme in an attempt to discern any differences between how participants feel about MAP compared to AP meetings. Table 37 provides the full written responses from all participants, sorted into themes and type of meeting. Five participants wrote that the good part of their MAP meetings was discussing goals and plans; six participants wrote similar comments after their AP meetings. Participant 10 (MAP meeting) and participant 19 (AP meeting) shared that being supported by the coach was the good part. Moreover, 9 participants (4 from MAP, 5 from AP) felt that there were no bad parts throughout their meetings. Two participants who went through the MAP meeting did not like facing their weaknesses, so did 2 other participants who went through the AP meeting. Lastly, 2 participants thought the bad part of their MAP meetings were that the meetings took away class time. One other participant who went through the AP meetings also thought that being away from class for the meeting is not ideal. In sum, it seemed like there were no clear differences in how participants view MAP compared to AP meetings based on the results on this qualitative analysis.

For the third question (differences between the two meetings), five themes emerged by using the constant-comparative method (Strauss & Corbin, 1990). It is noteworthy that this question is only asked after participants' second meeting. At this time point (after the second meeting), participants had completed both MAP and AP meetings, thus able to provide data to answer the research question directly (i.e., whether participants felt that MAP or AP was more acceptable). The first theme is that participants (n = 6; 4 from MAP 2 from AP) felt that they are more connected to the coach (i.e., *higher therapeutic alliance*) after their second meeting (see Table 38 for participants' comments sorted by themes), which is consistent with the quantitative

Table 37

Themes for Good and Bad Parts of Meeting

Participant	Meeting	Good and Bad Parts of the Meeting
Theme: Good – discussed goals and plans (*n* = 11; 5 MAP 6 AP)		
2	AP	There were many good parts such as making the plan.
3	MAP	The good part was being able to set a goal for myself.
4	MAP	The good parts are that it helped my motivation.
8	AP	I liked talking about ways to improve.
9	AP	The good parts were the helping of identifying how to rely on others.
11	MAP	Good - I saw what I need to work on.
12	MAP	Some good parts of the meeting were that my coach helped me come up with a plan and we had a good discussion about my goals.
14	MAP	Good - everything I need help with was discussed.
16	AP	I enjoyed and thought that talking about the things I need to work on was helpful.
17	AP	The good part was being able to break my goal down and figure out how to reach it.
20	AP	Good: I get to discuss my procrastination problem.
Theme: Good – felt supported by coach (*n* = 2; 1 MAP 1 AP)		
10	MAP	I think this helped me reassure myself that someone is on my side and can help me.
19	AP	The good part is that I'm going to fix my problems with the support of someone other than my mom.
Theme: Bad – no bad parts (*n* = 9; 4 MAP 5 AP)		
1	AP	There aren't any bad parts, but you can get help to do better with work.
2	AP	There were no bad parts.
5	MAP	All of it was good.
6	AP	I think there were no bad parts.
10	MAP	I don’t have any complaints.
12	MAP	No bad parts.
15	MAP	So far, I haven't had any bad parts.
16	AP	There weren't any bad parts.
19	AP	There were no bad parts.
Theme: Bad – admit weaknesses (*n* = 4; 2 MAP 2 AP)		
3	MAP	The bad part was having to admit the struggles to myself.
8	AP	I didn’t like realizing areas I need to work on.
9	AP	The bad part was noticing how much I lacked in a specific area.
14	MAP	Bad - I felt that the chart was a little off.
Theme: Bad – meeting took away class time (*n* = 3; 2 MAP 1 AP)		
4	MAP	The only bad thing is that it is during class.
7	AP	It takes up school time but should help me in school later.
11	MAP	Bad - the meeting took longer than I thought it would.

Note. These data were collected right after participants’ first meeting.

finding reported earlier in this section (significant order effect; S = -18.5, *N* = 20, *p* = .03). In contrast, only two participants (both received MAP first) shared that their *level of comfort remained the same* throughout both meetings. In addition, three participants (all received AP) reported higher increase in *progress towards goal* after the second meeting compared to the first meeting. This supports the finding of an order effect in progress towards goal (S = -18, *N* = 20, *p* = .04), in which participants consistently reported higher progress towards goal after their second meeting no matter which condition they were assigned. Another main difference that participants (*n* = 5) noted is that *new goals were set* during the second meeting, which is consistent with the study protocol. Two participants shared that the main difference they noticed between the meetings is that the *action plan is revised* during the second meeting, which again is the result of following the study protocol, instead of a difference between MAP and AP.

Finally, only 5 participants left comments on the last open-ended prompt, which is "additional comments and suggestions." Three were written after MAP meetings, two were written after AP meetings. No themes can be generated from those responses. Table 39 demonstrates the comments as they were written by participants.

In summary, it seemed like qualitative analyses on questions 1 (most interesting or useful), 2 (good and bad parts of meeting), and 4 (additional comments) did not reveal any differences between student satisfaction of MAP compared to AP meetings. However, those analyses produced interesting themes that provide context to the current study. On the other hand, some of the qualitative results derived from question 3 (differences between meetings) seemed to support some of the quantitative differences between MAP and AP. Specifically,

Table 38

Themes for Differences between Meetings (Written Feedback)

Participant	Meeting	Differences between Meetings
Theme: Higher therapeutic alliance in second meeting (*n* = 6; 4 MAP 2 AP)		
6	MAP	I feel like she understood more and could help me on a more personal level
7	MAP	I felt more comfortable and it was easier to talk knowing I had done this before.
8	MAP	This meeting felt more personalized to my needs.
9	MAP	The strategies were changed and developed. It was more personal such as things I like/want to do when I'm older.
11	AP	This meeting went by faster because my coach knew more about me.
13	AP	We went further into things related to me and my struggles. Last time, the majority of the time was spent on coming up with them rather than discussing them.
Theme: New goals were set (*n* = 5; 4 MAP 1 AP)		
1	MAP	I now will get better at 2 factors and not just 1.
2	MAP	Well she congratulated me on what I have achieved with my other goals and we set more goals.
9	MAP	The strategies were changed and developed. It was more personal such as things I like/want to do when I'm older.
10	AP	Our last meeting was checking up on my progress and this meeting was the same but also adding in another goal I can set for myself.
17	MAP	We changed the topic from time management to positive thinking and worked on new goals.
Theme: Increase in progress towards goal (*n* = 3; 3 AP)		
3	AP	The difference was the first time I felt a little skeptical about my plan but today I felt very excited to try my action plan out.
4	AP	Today my grades were in a much better place which allows me to focus on this plan.
18	AP	I was more relaxed and happier because I made progress on the goal we set.
Theme: Plans were revised (*n* = 2; 1 MAP 1 AP)		
5	AP	We got to see what I did and what I don't and slightly change the plan.
16	MAP	Today we talked a lot about how I can further improve my goal that we came up with last time.
Theme: Level of comfort remained the same (*n* = 2; 2 AP)		
12	AP	My coach was open to things I had to say, just like last time, and I like that she is helping expand my options for success in the future.
14	AP	I definitely always feel comfortable here and it relates to my last meeting strongly.

Note. Some written responses relate to more than one theme, and the author included those responses more than once. These data were collected right after participants' second meeting.

Table 39

Additional Comments and Suggestions

Participant	Meeting	Additional Comments and Suggestions
1	MAP	I think the plan will work.
8	MAP	Very good meeting.
9	MAP	In this meeting I was able to talk and get a personalized plan instead of a generic survey.
11	AP	I really enjoyed today's meeting.
15	AP	I really enjoyed the meeting and can't wait to get working on the next part of my plan.

themes generated from analyzing the written feedback support the quantitative findings that suggest participants reported higher *therapeutic alliance* and *progress towards goal* after their second meeting, regardless of the type of meeting they participated in.

Exit interviews. In addition to the written responses, participants also completed an exit interview during their third and last meeting with the coach, which took place approximately a month after the second intervention meeting (i.e., last MAP or AP meeting, per condition assignment). The interviews were brief (6 to 15 minutes) and involved three questions, namely "Please describe some differences between the two meetings we had?", "How comfortable do you feel during the first meeting? How about during the second meeting?", and "Anything else about your experiences during the two meetings that you would like to share?" The questions were similar to those on the written feedback form because the author aimed to seek verbal in addition to written responses on similar questions. To analyze these data, the author first transcribed the audio files into a Word document, then read the transcript multiple times while highlighting repetitive key words. Next, the author generated themes using the constant-comparative method (Strauss & Corbin, 1990).

For differences between MAP and AP meetings, only one theme emerged from qualitative analyses. Nine participants shared that the *first meeting felt more like the foundation,*

whereas the second functioned to revise goals and plans. Among the 9 participants, 6 were assigned to receive MAP first (condition 1). Table 40 displays all 9 participants' sentiments. This finding is consistent with the themes generated from analyzing participants' written responses to the same question after their second meeting. Specifically, participants shared that the main difference between the meetings include *setting new goals* and *revising action plans* during the second meeting.

For differences in comfort level, 14 participants (8 received MAP first) shared that they *felt more comfortable during the second meeting* while 5 participants (1 received MAP first) expressed that they *felt the same during both sessions*. Table 41 shows participants' comments sorted by themes. Similar to the trend observed in analyzing the written responses, more participants (14 compared to 5) reported that they felt more comfortable with the coach after the second meeting, providing some support to the existence of an order effect in which participants feel more comfortable after the second meeting no matter to which condition they were assigned.

When author asked participants for additional comments, some (6 participants, 2 received MAP first) shared that the meetings *helped them achieve personal goals* such as reducing stress and increasing grade. Furthermore, 6 participants (2 from condition 1) also reported that they *felt supported by the coach*. This finding resonates with the qualitative theme emerged from analyzing the written responses described earlier in this chapter. Specifically, participants shared that a good part of their meetings was being supported by the coach. Lastly, some participants (3, all from condition 1) expressed that the meetings helped them *identify areas that have room for growth*. This theme is similar to the other theme generated by written responses, which shows that participants view recognizing weaknesses as one of the most useful part of their meetings. Table 42 displays participants' transcript sorted by themes.

Table 40

Themes for Differences between Meetings (Exit Interview)

Participant	Condition	Transcript
Theme: The first meeting was the foundation, the second provided opportunity to revise goals and plans (*n* = 9; 6 vs. 3)		
2	2	I know the first one we were really just setting a goal… to see what I could do and then the second meeting we revised the goals to make them better, to see what I can improve on after the first meeting.
4	1	The first one was a lot more on paper... answering the questions on paper, and after the first one we actually started making plans, like plans of what I am actually going to do outside of the meeting.
5	1	The first meeting we figured out what we were going to do, and then we have like a plan. The second meeting was more like, see what works, see what didn't and kind of like, when you're doing something for the first time and you let it go, and then you see what's wrong with it, and you go back to fix it.
9	2	The first meeting was showing the graph and looking at it all at once, I can see it with numbers and logics and facts. The second meeting I got more in depth on why. The first one is setting goal, the second one was on why this is happening and how to change things.
11	1	I feel like the first meeting was like… very general and the basic of what my goal was. The second meeting was more in depth and more about the steps I need to take to reach my goal.
13	1	I remember at the first meeting we just identified a bunch of different things and we just went into the bare basics… the second meeting is when we talked about all the things I pointed out I want to work on... more in depth discussions about everything.
14	1	I think the first meeting really focused on the basics, like school and AP in general, and then the second meeting got more into personal.
15	1	I notice we went more in-depth during the second meeting. The first one was kind of just brushing the surface, talking about the overall idea and making the plan, whereas the second one was more of looking over, going into details on how I carried it out, and add on to that.
16	2	The first one was more talking about what I need to work on, and the second one we already knew what I need to work on and going a little more in depth.

Note. Condition 1 = MAP to AP, 2 = AP to MAP.

Table 41

Themes for Differences between Level of Comfort

Participant	Condition	Transcript
Theme: Increase in comfort during second meeting (*n* = 14; 8 vs. 6)		
3	1	I feel a lot more comfortable during the second meeting I think, because the first meeting I didn't really get to know you too well, and I was a little more nervous, I guess. During the second meeting I was more willing to talk through things, talk about the problems and goals.
4	1	The first meeting I was a little nervous because I get nervous around people that I don't talk to very often, but now I'm like pretty comfortable and not nervous anymore. It's just being around you [coach] more and it's not scary.
6	2	Well the first meeting I was like nervous a little bit, and not very open because I didn't really know you. I feel like the second meeting I was like "okay" now it's more comfortable. I think I'm more motivated to like do what you said to do because I've seen that it works.
7	2	Probably more comfortable during the second one. **"How so?"** I don't know. Been here before, just being in this room before, seen it.
8	2	I feel like the second meeting was better because you knew more about me, so it was more like personal. So, I feel like that one was better because we kind of made a plan that was important, and it worked. We went more in depth with the second meeting too.
9	2	The more meetings we have, the more comfortable I get just because… the first one was like "this is new. What is going on?" the second one was like I'm kind of used to this. I feel like you're not an intimidating person where I'm like freaking out, you are very nice and calm and I'm like yeah!
11	1	I generally feel more comfortable during the second meeting because I knew what was going to happen, whereas the first meeting I didn't know what was going to happen.
12	1	I think the first meeting I was a little confused, like what the whole experiment is about, I just didn't know what to expect. The second meeting I felt more comfortable and it felt better talking to you. I think I like the second meeting better, again I was more comfortable, and I knew what I was getting myself into. I just knew it's a positive effect on my life just in general because I know it would help me.
13	1	The first meeting I didn't know what to expect because… even though you said you were going to record it and I said okay, but I got a little nervous, but it slowly went away. Not hard to answer the questions, and I was able to say everything I wanted to say.

Table 41 (Continued)

14	1	The first meeting is… I don't know a little awkward because it's the first time I ever really get to sit down with you and face to face talk, but then the second meeting and from there on it has just been more comfortable because we've talked and I've shared everything with you. You've helped me through school and personal matters.
15	1	The first meeting was a little awkward, but after that I'm pretty comfortable, because, obviously the first time I haven't done this before and I'm not sure how this is going to go, what I have to talk about, and it kind of made me nervous but the second one is like I got this.
18	1	The second meeting feels more natural, the first one was like "What am I going to do?" Out of 10 scale, the first one would be 6-ish, and now I feel like a 10, cause you're a pretty cool dude.
19	2	The first time I was kind of scared, because seeing you in class is not the same as having a relationship with you, it was weird to say "oh yeah I'm not doing too good in AP" because everyone else in my class in doing so good. I don't know if I'm like average or I'm like low, so I kind of felt like insecure. The second meeting I was able to open up more, so that was nice.
20	2	I'm used to it when we meet for the second time. I feel more comfortable during the second meeting.
Theme: Comfort level remained the same (*n* = 5; 1 vs. 4)		
1	2	I just feel the same. **"You just feel equally comfortable?"** Yes.
2	2	I feel equally comfortable. I feel very comfortable sharing my progress and talking about areas for growth, I'm not afraid to share that with anyone.
5	1	I feel like it is the same. I mean the first one I feel… I don't know…. Yeah pretty much the same.
16	2	I was fine during both. **"No differences?"** No.
17	2	Probably just as comfortable for both just because it wasn't stressful, but it wasn't super laid back either.

Note. Condition 1 = MAP to AP, 2 = AP to MAP.

Table 42

Additional Comments from Exit Interview

Participant	Condition	Transcript
Theme: The meetings helped achieve personal goals (*n* = 6; 2 vs. 4)		
1	2	Well they worked. I get more work done. Usually I just stop working on it, but now I keep working on it.
8	2	I enjoyed them. I feel like they helped. It made me more self-aware on stuff I need to work on. I like being able to identify things that I can work on.
14	1	Well having that connection with my parents now, and feel trust, it really does help me with my schoolwork, I know that I can always go to them and tell them about it. I don't contain my stress to myself anymore or just my friends over the phone or media. Instead, I can go face to face with my parents. It was a good experience, and just helped me through a lot. Stress wise it has gone from like 10 to 3, 4 or 5.
17	2	It has made my time management better, which is something I've always wanted to improve.
18	1	Not really. Just that the meetings have been a positive influence on my academic behaviors. I feel good, it helped me a lot.
19	2	It [the meetings] helped me become a better student, so my grades are getting better, so that's a plus. It's not even just for AP, it's for all my classes. That helps me out a lot because I remember getting texts from my mom "This grade is dropping. What's happening here?" I got stressed out. Now for once I'm actually focusing on, actually caring about, like in the middle of the year I started getting lazy, now I try to get back to my old habits from the beginning of the year. I'm getting there. I also stopped copying other students' work and letting others copy my work.
Theme: Participants felt supported (*n* = 6; 2 vs. 4)		
2	2	I know setting the goals helped a lot because like the meeting with you after setting the goal helped a lot, because you have somebody come back with a progress, because some kids don’t have guardians or something to share progress with. I know that coming back to you that they have somebody to come back to and "yeah look what I did, I accomplished what I said I would.
6	2	It's been like… after the first one it was very easy to talk, and to discussed and to be able to make the plans it's very cooperative. **"What do you mean by cooperative?"** If I say something, then you'll say something that kind of compliments what I say, in a way where it's like you can do this... and you can do this... that will help. It's like very... understanding kind of.

Table 42 (Continued)

9	2	People know I get anxious because it's visible [on my face], but I never had anybody helped me with it because I don't really talk to my parents or my friends. A lot of the time my friends just say "Just do it." and that doesn't really help me, I try to force myself... but this is just different, having someone that's not a therapist, but more of a good coach I guess. **"You're against the idea of getting therapy."** Yeah, maybe later on therapy but now I have a lot of things I need to do on my plate and therapy will take up my time.
10	1	It's nice to talk to someone. Parents, you know, sometimes aren't always there for you, I mean they should be, most parents are, but sometimes maybe something is going on in their personal lives that might be hard on them, some people don't have parents, and your friends, you can go to your friends, but sometimes they can't relate to some things. Either your friend will listen, or they just don't care, so when you come in and you sit down and you say so here's what you're doing badly, how are we going to improve this, really sits you down and talk to you, it feels very nice, someone listening to you.
15	1	Other than the fact that I felt really comfortable the whole time, like you are a really nice person to talk to. Most people are very judgmental, and it shows, but with you, I'm talking and you're just listening, taking it all in, and thinking about it, instead of just immediately jumping to conclusions and judging people, and I really like that. It was really nice to just be able to get away from it for a minute and talk.
20	2	It helped me voice what I want to say, I usually don't tell other people my opinions. Talking to people about my plan help me voice what I want to do.
Theme: The meetings helped point out room for growth (*n* = 3; 3 condition 1)		
11	1	I think they are very helpful for me. Kind of a nice time to set aside to see what I need to focus on, instead of continuing with my day.
12	1	I just thought that this was a really good experience, because not a lot of people get to like… not everybody get to do this [one-on-one meeting] so I think it's good that I get to know things that need improvement and just kind of like put school behind me for a second and focus on me and what I should do better to improve my lifestyle and I think it's good that I get the opportunity to do that.
13	1	This has been one of those situations where I was able to think about everything I can improve on rationally, sometimes it's hard to figure out flaws in myself, because I don't really want to criticize myself, but this has helped me identified them. This is helping me improve them, like I don't do a lot of the things I do now before this meeting.

Note. Condition 1 = MAP to AP, 2 = AP to MAP.

In summary, some of the themes generated from analyzing the exit interviews align with the themes discovered through analyzing written responses. For example, the theme *first meeting felt more like the foundation, whereas the second functioned to revise their goals and plans* from exit interview is similar to *setting new goals* and *revising action plans* from written feedback. Moreover, the themes *feel supported by coach* and *recognize areas for growth* also emerged from both written feedback and exit interview analyses. In addition, participants shared through exit interviews that the meetings *helped them achieve various goals*, including stress reduction, grade improvement, and relationship development. This theme overlaps with the some of the themes generated through written feedback, in which participants reported that the most useful part of their meetings was *action planning* and that one of the good parts of the meeting is that they were able to *discuss their goals and plans*. Lastly, it is noteworthy that the analyses on exit interviews data revealed more evidence to support the idea that an order effect occurred (i.e., participants feel more comfortable with the coach after the second meeting despite the condition they were assigned). As there are many overlaps between the quantitative and qualitative themes, table 43 provides a visual summary of the overlaps.

Feasibility

Each meeting (MAP or AP) was designed to last from 30 to 45 minutes, which is within the length of one period in a typical high school schedule. In this study, the average length of MAP meetings was 44 minutes, with a range from 31 to 55 minutes. In comparison, the average length of AP meetings was 32 minutes, with a range from 21 to 49 minutes. The meetings that lasted longer than 45 minutes usually involved a very talkative or quiet student, suggesting that student factors play a role in session length. Nonetheless, the longest session was only 10 more minutes over a typical high school period, which suggests that participants' schedule was not

Table 43

Overlapping Quantitative and Qualitative Findings

	Data from Different Sources		
Overlapping Findings	**Quantitative**	**Qualitative (Written Feedback)**	**Qualitative (Exit Interview)**
Higher *student-reported therapeutic alliance* after the second meeting.	Wilcoxon Signed Rank Test revealed significant order effect (S = -18.5, *N* = 20, *p* = .03).	Six participants reported higher therapeutic alliance after second meeting while only 2 reported level of comfort remained the same.	14 participants reported feeling more comfortable during the second meeting while only 5 participants expressed that they felt the same during both sessions.
Higher *perceived progress towards goal* after the second meeting.	Wilcoxon Signed Rank Test revealed significant order effect (S = -18, *N* = 20, *p* = .04).	Three participants reported higher increase in progress towards goal after the second meeting compared to the first meeting.	N/A
The main differences between the two meetings being that participants get to *set new goals* and *revise action plans* at meeting 2.	N/A	Five participants reported difference between meeting 1 and 2 is setting new goals; Two participants reported difference between meeting 1 and 2 being that they get to revise action plans in meeting 2.	Nine participants reported that first meeting felt more like the foundation, whereas the second functioned to revise their goals and plans.
Participants reported that they *felt supported by the coach*.	Participants reported high mean scores (4.70 for MAP and 4.75 for AP over a 5-point Likert-scale that range from 1 = not at all to 5 = totally) on the item: "In this meeting, do you feel that your coach will stick with you no matter how you behaved?"	Two participants wrote that one of the good parts of the meeting is that they felt supported by the coach.	Six participants shared that they felt supported by coach when asked if they have any additional comments.

Table 43 (Continued)

Participants reported that the meetings helped them *recognize personal room for growth*.	N/A	Five participants shared that the most interesting or useful part of the meeting was that they get the opportunity to recognize their own weaknesses.	Three participants expressed that the meetings helped them learn their weaknesses when asked for additional comments.
Participants appreciate that the meetings helped them *plan and achieve personal goals*.	N/A	Fifteen participants wrote that the most interesting or useful part of the first meeting is to action plan. Moreover, 11 participants reported good part of their meeting was that they get the opportunity to discuss their personal goals and plans.	Six participants shared that the meetings helped them achieve personal goals such as reducing stress and increasing grade when asked for additional comments.

Note. N/A = No data available.

disturbed drastically. This is especially true because all meetings were carried out during participants' elective periods. Moreover, the author always asked participants if it was a good time to have a meeting before getting started. In the rare event that a student said no (e.g., when they are about to take a test next period), the author rescheduled those meetings.

Fidelity to Intervention Protocols

In order to determine the extent to which the author followed the intervention protocol for MAP or AP meeting, all meetings were audio recorded and the author used fidelity checklists to code all meetings. Two fidelity checklists were used (one for MAP meetings, the other for AP meetings; attached as Appendices I and J). The average fidelity for MAP meetings is 98% (99% for participants who receive MAP first [condition 1] and 98% for participants who receive MAP second [condition 2]). The overall fidelity for AP meetings is 98% (100% for participants who receive MAP first [condition 1] and 96% for participants who receive MAP second [condition 2]). Forty percent of audio files (8 out of 20) were also assigned to two other graduate students in the School Psychology program for fidelity monitoring purposes, and to establish inter-rater reliability. The author randomly chose two tapes from MAP (condition 1), MAP (condition 2), AP (condition 1), and AP (condition 2). The inter-rater reliability was 100%.

Chapter V: Discussion

The first purpose of the current study was to compare the efficacy of a school-based student-focused Motivational Interviewing (MI) intervention, called Motivation, Assessment, and Planning (MAP), to an Action Planning (AP) intervention. The goal of MAP is to help students in accelerated curricula with academic and/or emotional risks develop coping and engagement skills that are associated with success among this population. The second purpose of this study was to examine the differences in student acceptability between the two interventions. This chapter first summarizes the findings of this study, then compares the results to previous studies. Next, the implications and limitations of this study are discussed. Lastly, this study explores directions for future research in this realm.

Efficacy of MAP Compared to AP

The main purpose of this study (research question 1) was to compare the efficacy of a newly developed school-based, student-focused Motivational Interviewing (MI) intervention termed Motivation, Assessment, and Planning (MAP) to an Action Planning (AP) intervention, which is commonly embedded as part of other school-based intervention that are cognitive-behavioral in nature (Kendall, 2011; Langberg et al., 2012). Although MAP has been found to be feasible and acceptable in previous trials (O'Brennan et al., 2019), this study offers a closer look at its efficacy. Specifically, Wilcoxon Signed Rank tests revealed that participants (N = 20) reported a significantly higher level of the importance to change after MAP compared to AP meetings (S = 35.5, N = 20, p = 0.04). This finding is consistent with the hypothesis of this study,

which was that participants will demonstrate better outcome (i.e., higher importance to change) after participating in counseling sessions that utilize MI (use of MI was more evident in MAP compared to AP meetings as coded with the MITI). According to Miller and Rollnick (2012), one of the main goals of MI-based intervention is to affect change in behavior through *increasing individual's sense of importance to change*. Through building higher sense of importance to change, coach helps individuals realize the discrepancy between personal goals or values and their current behavior, which leads to increase in desire to make changes to decrease the discrepancy (Resnicow & McMaster, 2012; Rollnick et al., 2010). Importance of change has been shown to reliably predict whether individuals quit smoking (Butler et al., 1999; Rollnick, Mason, & Butler, 1999) and drinking (Bertholet et al., 2012). Furthermore, this finding of greater sense of importance to change following MAP is consistent with findings of other studies that support the efficacy of school-based, student-focused MI interventions (Snape & Atkinson, 2016). There is one caveat, which is that individuals also need sufficient confidence to change in addition to feeling that change is important to best predict behavior change (Miller & Rollnick, 2012). Since there is no significant differences between participants' confidence to change after MAP compared to AP meetings (both means were high; 4.38 for MAP and 4.35 for AP on a 5-point scale), the findings of this study suggests that MAP, when implemented with satisfactory MI quality, may be more effective than AP in affecting change in behavior as MAP is more effective in increasing participants' perceived importance to make changes, one of the necessary ingredients for change in behavior.

Another significant finding revealed through Wilcoxon Signed Rank test is that the author/coach perceived significantly higher level of therapeutic alliance with participants after MAP compared to AP meetings. However, Wilcoxon Signed Rank test detected no significant

differences between participant/student perceived therapeutic alliance after MAP and AP meeting. As client-rated therapeutic alliance has shown to be most predictive of therapy outcomes (Lambert & Barley, 2001) and there is a possibility that the coach/author, being not blind to the conditions, was biased in rating the alliance of each meeting, the author prioritized student-reported over coach-reported therapeutic alliance during the interpretation of the results. Thus, this author is not suggesting that therapeutic alliance was actually higher in MAP compared to AP meeting. However, alliance as perceived by interventionists has been shown to be helpful in prior research, with benefits including catching ruptures in alliance during early stages of therapy (Eames & Roth, 2000). Since the means of coach-rated therapeutic alliance in this study are above 3 out of a 5-point scale (4.67 for MAP; 3.18 for AP), ruptures were unlikely to have occurred, thus eliminating rupture as a possible factor that influenced the outcomes of this study. On the other hand, the correlations between student and coach-reported therapeutic alliance are positive but low during both MAP and AP meetings in this study, which is consistent with findings from previous research on alliance (Hersoug et al., 2001). The correlations may increase over time if the study has more than two sessions as past research revealed that therapist and client-rated alliance tend to converge over time in successful treatments (Horvath, 2001; Zorzella, Rependa, & Muller, 2017). It is also possible that youth participants in this study may had exhibited socially desirable responding when reporting therapeutic alliance after each meeting. In other words, participants may have consistently reported high level of therapeutic alliance because they were biased toward liking/pleasing the coach.

Similar to findings with student-reported alliance, this study also found no significant differences between other outcomes, including confidence to change and goal attainment. In sum, only two of five outcomes indicted beneficial impact of MAP in relation to an active

comparison condition, and one of those indicators is from a potentially biased source (i.e., therapist-rated alliance). Since only one of four outcome areas as rated by students favored MAP, no substantive conclusions can be made; findings from this study do not support MAP or AP as more effective in increasing therapeutic alliance, participants' confidence to change, and goal attainment, but indicate MAP is tied to greater importance of change. Taken as a set, these inconclusive findings may be due to many reasons. For instance, it is possible that participants reported high therapeutic alliance across interventions due to socially desirable responding. In addition, the measures adopted in this study might not be precise or sensitive enough to detect differences between MAP and AP. It is also possible that the current study has insufficient statistical power (small sample size) to detect differences in outcomes. Lastly, it is possible that there is indeed no difference between how effective MAP and AP are in affecting Advanced Placement students' immediate confidence to change, therapeutic alliance, and goal attainment over one month (conclusions about goal attainment in the long run were not examined, and some participants may need more time to complete their action plan and show progress). That being said, the findings of this study demonstrate positive effects of MAP on students' perceptions of the importance of making a positive change in one's behavior, and also provide some initial evidence to support that AP may be as effective as MAP in affecting participants' confidence to change, alliance with coach, and goal attainment. This is noteworthy as it shines light on the effectiveness of AP as a standalone intervention, which is lacking in the current school-based intervention literature as AP is often used in conjunction with other interventions in schools.

Acceptability of MAP Compared to AP

Research question 2 of this study focused on investigating whether participants find one intervention (MAP or AP) more acceptable than the other. Quantitative and qualitative data were

collected to answer this research question. Quantitatively, Wilcoxon Signed Rank test revealed non-significant differences in student satisfaction of MAP compared to AP meetings. This shows that this study does not have enough evidence to suggest whether participants accept MAP more than AP, or vice versa. Similar to research question 1, this inconclusive finding may be due to the smaller sample size of this study leading to less statistical power to detect differences between MAP and AP.

Qualitatively, constant-comparative analysis on written feedback revealed that an almost equal number of participants in MAP or AP meetings felt that the good parts of the meeting include discussing goals and plans (n = 5 and 6) as well as feeling supported by coach (n = 1 and 1). When asked about the bad parts of their meetings, analysis again revealed that almost equal number of participants in MAP or AP meetings felt that there are either no bad parts (n = 4 and 5) or reported admitting to weaknesses (n = 2 and 2) and being away from class (n = 2 and 1) were the only bad parts. Overall, the qualitative finding suggests that participants do not feel that any one intervention (MAP or AP) have more good than bad parts, and vice versa.

On the other hand, when asked to write about the differences between the two meetings (written feedback), participants wrote that the main differences are that at the second meeting, they set new goals and revised action plans. At the exit interview (verbal feedback), participants (n = 9) view the first meeting as the foundation to set their goals and the second meeting as the platform to further revise their plans. Collectively, it seems like the main difference perceived by participants is more related to the structure of the meeting (i.e., activities they engaged in the meeting). The two meetings do have connecting parts (e.g., reviewing past action plans during the second meeting), which may have deterred participants from comparing the two interventions (MAP and AP) as separate meetings. This leads to information that does not necessarily answer

the research question (i.e., do participants find MAP more acceptable than AP or vice versa), but suggests that in general students feel less comfortable during the initial therapeutic contact with an interventionist regardless of the intervention framework utilized.

In sum, it seems like neither quantitative or qualitative data provided evidence to suggest that participants preferred one intervention over the other (MAP vs. AP). Instead, ratings of acceptability were high in both interventions, including a mean score of 4.64 (MAP) and 4.60 (AP) on the 1 – 5 response metrics (1 = strongly disagree and 5 = strongly agree). These mean scores suggest that participants find both interventions highly acceptable. This inconclusive result may be due to many of the aforementioned possible reasons (e.g., socially desirable responding, small sample size, low precision of measurement) or it may be that there are no differences between acceptability of the two interventions among this population (Advanced Placement students). Although this study did not find any conclusive findings, past trials suggest that MAP is highly acceptable among its intended population (i.e., students in accelerated curricula; O'Brennan et al., 2019), which is replicated in this study. Moreover, MI's collaborative nature and support for autonomy is a good fit for the population of this study (high school freshmen; Kaplan, 2014). In contrast, to the best of the author's knowledge, the acceptability of AP as a standalone intervention in schools is unclear, in part because it is most often used in conjunction with other interventions. Thus, the fact that participants find AP as acceptable as MAP is a result worthy of noting as it shines some light on how AP fares as a standalone intervention among students in accelerated curricula.

Order Effects

This researcher did not originally intend to systematically examine order effects, but in reviewing student data from meeting one and meeting two took note of the elevated scores after

meeting two regardless of condition assignment. Post-hoc Wilcoxon Signed Rank tests revealed a significant difference between student-reported therapeutic alliance scores at meeting 1 and 2. In particular, students reported higher therapeutic alliance after their second meeting, no matter to which condition they were assigned (to receive MAP or AP first). This order effect is further supported by qualitative theme relates to participants' level of comfort. From analyzing written feedback, this study found that participants (n = 6) felt more comfortable with the coach at the second meeting, although a small number (n = 2) said they felt equally comfortable at both meetings. This finding is found again in analyzing verbal feedback, in which more participants (n = 14 vs. 5) shared that they felt more comfortable with the coach in the second meeting compared to being equally comfortable at both meetings. Although this finding does not provide evidence to support whether participants preferred one meeting over the other, it does suggest an order effect. In other words, it seems like participants felt more comfortable in the second meeting, no matter which condition they were assigned (i.e., whether they received MAP or AP first).

This order effect can be partly explained by the details provided by participants during qualitative feedback. They shared that the first meeting is more nerve wrecking as they did not know what to expect, but as time went on they felt more comfortable with the coach. Perhaps this initial feeling of nervousness is so strong for most participants, that it masked any potential differences between level of comfort at MAP compared to AP meetings. Shirk and Karver (2011) demonstrate that the correlation between therapeutic alliance and outcomes tend to increase over time. Following this trend, it makes sense that the alliance scores are higher at the end of the second meeting, as it should continue to increase over time according to Shirk and Karver (2011). They also recommend that the earliest time period to assess alliance should be

around third to fifth session as that is the earliest scores that reliably predict outcomes and dropouts (Shirk & Karver, 2011). Because this author was familiar to all of the participants—having just delivered 12 weeks of classwide lessons that comprise the ACE program—it was somewhat unexpected that individual students would be uneasy during the first MAP or AP meeting.

Wilcoxon Signed Rank test also revealed another order effect. Participants self-reported higher level of progress towards goal after the second meeting, no matter which intervention they received at that meeting. This order effect is also supported by qualitative analysis of written feedback, which revealed that some participants (n = 3) felt that they made more progress on their second action plan, no matter to which condition they were assigned. This finding is not surprising as participants may have developed more efficacy in setting goals, designing action plans, and carrying out the steps after having the opportunity to go through the same process with the coach once.

Additional Qualitative Results

In addition to asking participants about the differences between the two meetings and how comfortable they felt (research question 2), this study also included more qualitative questions that aim to further understand participants' view on the two interventions, MAP and AP. Analysis of participants' written and verbal feedback generated themes that provide context to this study. For example, three-quarter of participants (n = 15) shared that the most interesting or useful part of the meeting is action planning. It is important to note that this finding does not necessarily suggest that participants prefer AP over MAP because they were not directly comparing MAP to AP in this instance. Since the processes of MAP (e.g., open-ended questions, affirmations, reflections, and summaries) are much subtler than AP (i.e., the part where students

brainstorm and make plans), the author does not view this theme (participants find action planning as most interesting/useful) as an indicative of AP being more acceptable. Instead, participants are just expressing which parts of the meetings were most obviously interesting to them. The fact that participants mentioned similar good and bad parts for both types of meetings support this interpretation. Nonetheless, it is noteworthy that participants view the action planning process so favorably, as the effects of AP as a standalone intervention in the current literature remains unclear as it is often used in conjunction with other interventions in schools (e.g., HOPS; Langberg et al., 2012).

In addition to action planning, participants also find comparing level of coping and engagement to other students on the graph (n = 7) and recognizing weaknesses (n = 5) as the most interesting or useful parts of their meetings. This suggests that this targeted population (students in accelerated curricula) enjoy a little competition and comparison with others.

It is also noteworthy that participants expressed that the meetings helped them achieve personal goals (n = 11 written; n = 6 verbal) and they felt supported by the coach (n = 2 written; n = 3 verbal). Both intervention frameworks (MI-based intervention and AP) have been shown to be effective in helping individuals make positive changes in clinical settings (Bélanger-Gravel et al., 2013; Lundahl & Burke, 2009). Although the goal of this study is to examine whether one of these interventions is more appropriate for students enrolled in accelerated curricula, it is reassuring to learn that participants ultimately perceived benefiting from these meetings.

Limitations

Several limitations pertained to this study. First, this study used a convenience sample—youth attending a partner school whose administration expressed high interest in adopting the comprehensive intervention in development. Compared to random sampling, this sampling method produced lower generalizability of findings, which posed as a threat to the population

validity. The intervention protocols of this study are also designed to target the needs of a specific population, namely students in accelerated curricula. The author does not recommend readers of this dissertation attempt to apply the intervention protocols to other student populations. Second, the sample size is small (N = 20). Although non-parametric statistical methods were used to compensate for this limitation, a larger sample size would have provided more power for this study to detect any differences between MAP and AP. Third, the author, who is also the interventionist in this study, may have been biased in rating therapeutic alliance with participants. This is because the author generated a hypothesis that participants would experience higher therapeutic alliance during MAP compared to AP meetings. As the author is not blind to the condition (MAP or AP) to which participants were assigned, it might have influenced how the author rated therapeutic alliance for each session (i.e., the author may have rated higher alliance for MAP vs. AP sessions due to biases). To address this limitation, this study also collected another source of therapeutic alliance, specifically alliance rating from participants. Furthermore, participants experienced some order effects (higher therapeutic alliance and more progress towards goal after the second meeting, no matter which intervention they received at that meeting) due to the limitation of the study design in which intervention began immediately in the first counseling session. Finally, there were some technical challenges in comparing MAP and AP due to the design of the intervention protocols. The MAP protocol, rooted in MI, rather quickly covers four conceptually distinct processes (engage, focus, evoke, and plan) that are sometimes treated as separate conversations. In contrast, the AP protocol is comprised mainly of one stage- planning. In a different study that would compare the planning stage of MAP to AP, the author expects there might be more similarities than differences.

Study Contributions to Practice

Initial themes in an ongoing qualitative study by the author's research group (details of this study are described in chapter 2) that involve 12 school mental health practitioners revealed that they favor the action planning portion of the MAP intervention and seemed confident that action planning plays the biggest role in helping students commit and enact behavior changes that lead to self-determined goal. This is consistent with the general emphasis on using action planning in school-based interventions, such as in school wide positive behavior supports (Sugai & Horner, 2002) and in individual counseling sessions with cognitive-behavioral therapy (Kendall, 1985; Kendall, 2011), one of the most popular therapy approaches among school mental health providers (Hanchon & Fernald, 2013). As time is often a limited resource in school, it is important to investigate this sentiment.

Results of statistical tests in the current study revealed that participants reported significantly higher importance of change after MAP compared to AP. However, the other tests revealed no differences in whether participants felt more confident to change, experienced higher therapeutic alliance, or attained more of their goals. Findings from this study did not support one intervention as more acceptable than the other (MAP vs. AP), instead both were viewed positively. However, the results favor MAP over AP in terms of increasing students' perceived importance to enact positive change to be more successful in Advanced Placement class. According to Miller and Rollnick (2012), importance to change is essential in moving individuals towards behavioral change, as individuals who view change as important are more likely to see the discrepancy between their current behaviors and personal goals/values, thus are more likely to enact behaviors to decrease the discrepancy. This technique of encouraging individuals to view change as important has been shown to be successful in helping individuals

make positive changes in life, such as stop smoking (Butler et al., 1999; Rollnick, Mason, & Butler, 1999) and drinking (Bertholet et al., 2012). It has also been shown to affect various school-related outcomes (e.g., attendance and grades) when applied in educational settings (Snape & Atkinson, 2016). Since there seems to be some additional benefits of implementing all four stages of MI with respect to enhanced perceptions of the importance of changing, the results of this study provide some support to encourage practitioners to devote the time to learn more about MI and to not skip the first three stages (engage, focus, evoke) and jump straight into action planning. On the other hand, AP and MAP were relatively equally as effective in helping participants increase confidence to make changes, form high therapeutic alliance, and attain immediate goals. This finding provides some evidence to suggest that practitioners who are not as familiar with MI— or practitioners who simply decide to use AP as a standalone intervention—might expect AP to be as effective as MAP in affecting proximal student outcomes, at least when utilized with students in accelerated courses. Moreover, AP is also more cost-effective as the average time of AP meetings are shorter than MAP meetings (44 compared to 32 minutes). From a Multi-Tiered Systems of Support (MTSS) standpoint, both MAP and AP would be worthy of consideration if a high school decides to incorporate a Tier 2 intervention for students in accelerated courses. This is because both interventions have been shown to be feasible and acceptable in this study. However, schools with limited resources (e.g., low availability of mental health providers, limited finances to train mental health providers to be competent in MI, etc.) may find AP to be more appealing as it is potentially more cost effective and has some support for being as effective as MAP in affecting most of the outcomes (i.e., confidence to change, therapeutic alliance, and goal attainment).

It is important to note that the MAP intervention adopted in this study differs slightly from the original MAP intervention developed through the larger grant (R305A150543). Specifically, the second meeting was compulsory in this study, but is optional in the original MAP intervention. In addition, this study also sent out a second reminder letter after the second meeting and held a termination session a month after the second meeting. These two elements are absent in the original MAP intervention. They were added to the current implementation of MAP to adapt to the study design (a between subject design requires all participants to go through both interventions [two meetings; MAP and AP] and goal attainment data can only be collected approximately one month after a meeting). Thus, the coach/author in this study had more face-to-face time with participants to show care and provide accountability to a second action plan; future coaches who choose to implement the original MAP intervention should expect to have less contact time with their students if they delivery MAP as originally advanced.

Study Contributions to the Literature

To the best of the author's knowledge, there is no study in the current literature that compared the efficacy and acceptability of a school-based, student-focused MI intervention to a standalone Action Planning (AP) intervention. This study shed some light on how the two interventions affected ninth grade Advanced Placement students' perceived importance to change, confidence to change, therapeutic alliance with coach, and goal attainment. This study also provided students with an avenue to voice their acceptability of the two interventions. These findings are important because high school students enrolled in accelerated curricula are traditionally underserved (Suldo et al., 2018) even though they tend to report higher level of stress compared to general education students (Suldo & Shaunessy-Dedrick, 2013). The findings of this study add to the literature by providing some information on how different types of Tier 2

interventions are received by this student population, which can help inform best practices to support high school students in accelerated curricula.

It is also noteworthy that this study contributed to the literature by providing an insight into how ninth grade students in Advanced Placement class perceived AP as a standalone intervention. In the current school-based research literature, AP is often used in conjunction with other interventions such as a popular counseling model, CBT (Kendall, 2011) or positive behavior support strategies (Sugai & Horner, 2002). This study compared AP as a standalone intervention to MAP and found that participants accept AP as much as they accept MAP. In fact, more than half of the participants (n = 15) reported the action planning process as the most interesting/useful part of their meetings. Furthermore, this study's findings also suggested that AP is as effective as MAP in affecting participants' proximal outcomes (i.e., confidence to change, therapeutic alliance, and goal attainment). Although associations between MAP and AP and distal outcomes such as academic performance, stress levels, and engagement are lacking, preliminary information from this study can aid readers in making evidence-based decisions to support students enrolled in accelerated curricula.

Future Directions

The current study provided many directions for future research in the realm of supporting youth enrolled in accelerated curricula. For example, future research can replicate this study with a larger sample size that also includes students in a different type of accelerated program, such as International Baccalaureate. The larger sample size will increase the statistical power to detect any differences between student outcomes and acceptability. In addition, future studies can choose to adopt a between-subject design with larger sample size to explore interaction effects. Moreover, with a between-subject design, participants will not receive both conditions, thus no

order or practice effects will occur. In terms of expanding the target population, although it would be inappropriate to use the intervention protocols of this study on general education students, it may be worthwhile to test out the interventions on Advanced Placement/International Baccalaureate students who are in 10th, 11th, and 12th grade. It would also be interesting to have more than one interventionist involved in future studies, to provide some insights into whether the coach plays a role in affecting student outcomes and acceptability. Future studies can also investigate the long-term effects of MAP and AP. For example, future research can explore whether students who participated in MAP and AP generalize the skills they learned to address future challenges and whether the effects of MAP and AP can be further differentiated in the long term. Finally, future research can focus on coding instances of change talk in the de-identified audio files from this study because frequency of change talk has been shown to be predictive of behavioral change (Apodaca & Longabaugh, 2009). Although it is beyond the resources of this study to include frequency of change talk as an outcome variable, future studies can address this issue by applying for funding or searching for professional collaborations with other MI experts.

Summary

This randomized, within-subject study aimed to compare the efficacy and acceptability of two interventions (MAP and AP) with a specific population – ninth grade students enrolled in accelerated curricula. MAP is a newly developed school-based, student focused Motivational Interviewing (MI) intervention, whereas Action Planning (AP) is a long-standing school-based intervention that is often incorporated as part of other interventions such as CBT (Kendall, 2011) and positive behavior interventions (Sugai & Horner, 2002). Participants reported significantly higher level of importance to change after MAP compared to AP meetings. No significant differences were observed for the other outcome variables: confidence to change, student-rated

therapeutic alliance, or goal attainment. Similarly, there were no significant differences between student acceptability of MAP and AP. Instead, participants consistently reported higher therapeutic alliance and progress towards goal after their second meeting with the interventionist, no matter which condition they were assigned to receive first (MAP or AP). These order effects were supported by themes generated from qualitative analyses (constant-comparative). Qualitative analyses pertinent to acceptability further failed to support that participants found one intervention to be more acceptable than the other. Instead, participants generally find both meetings to be helpful. For example, they shared that the meetings helped them achieve personal goals (e.g., reducing stress, increasing grades, etc.) and recognize own weaknesses. They were especially interested in setting goals, completing action plans, and revising steps to achieve goals (n = 15). Finally, participants felt supported by the coach throughout both meetings.

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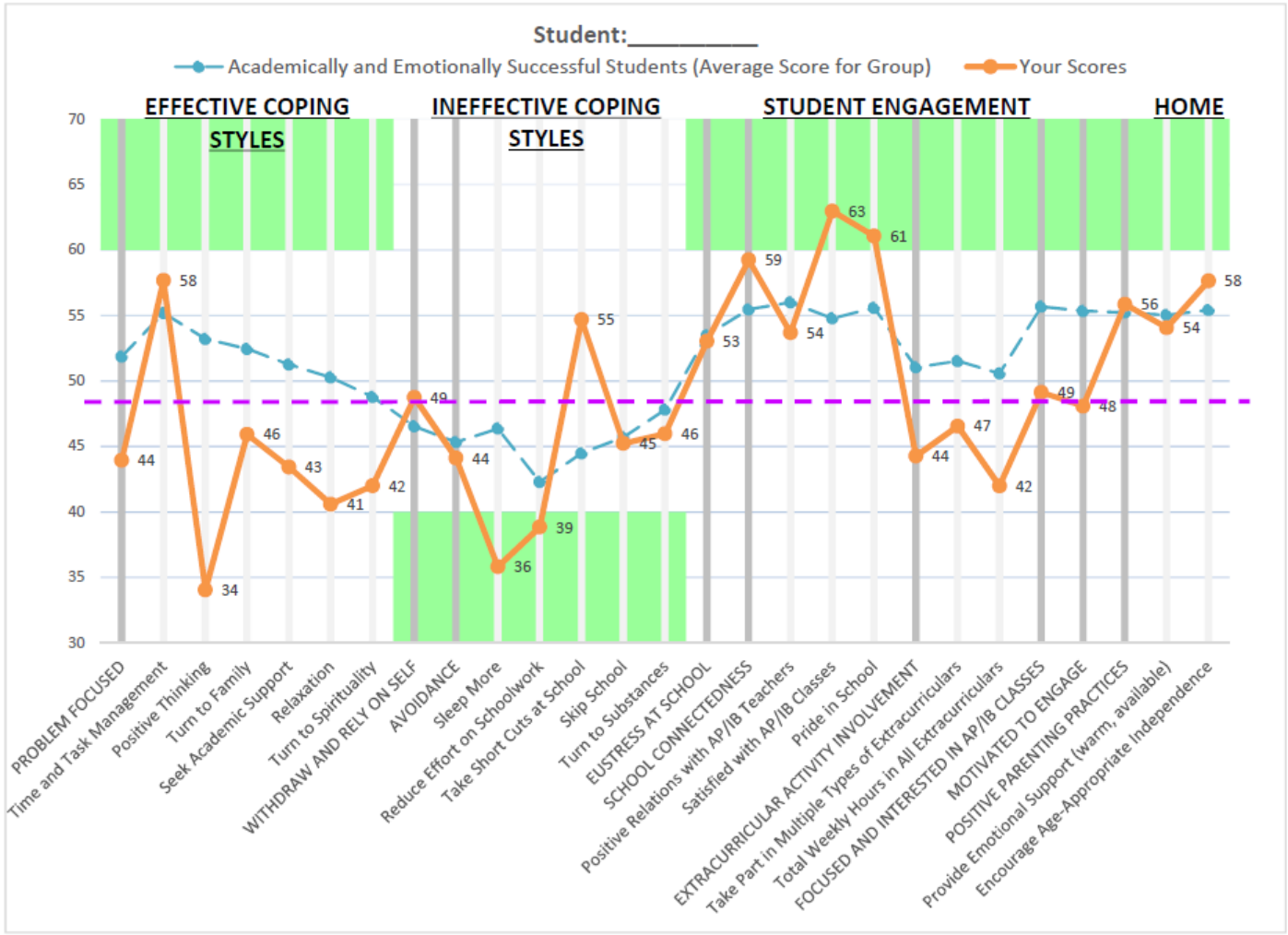
Appendix A: Sample MAP Student Graph



Appendix B: Reminder Letter

Dear Student,

Thank you for participating in the ACE Program's Motivation, Assessment, and Planning (MAP) meeting last month. It was so nice getting to know you better, and learning about your values, strengths, and goals for the future! I hope all is going well with school!

During our meeting on [Date], we created an action plan to help you use [target skill] more often in times of stress at school. You thought of great steps for taking action towards reaching your goal, including:

Step	Action	By (date)
1		
2		
3		
4		

In case you find yourself struggling to meet your goal, don't forget the great solutions to likely barriers you came up, including:

Potential Barrier	Solution

After [date], we can touch base and talk more about your action plan. In the meantime, please consider completing the questions below.

	Question to Self:	Notes to Self:
1	How am I doing in AP Human Geo, in terms of grades, emotional well-being, and stress?	
2	Why is academic and emotional success in AP important to my future?	
3	What are the three good things that would happen I reached my goal this week?	
4	What can I do to make use of my action plan this week more likely?	

I can't wait to see you in a couple of weeks to learn about your progress with this plan!

Best,
Coach, ACE Program Coach

Appendix C: Progress Towards Goal Form

Name: _____
Date of meeting:_____

Thank you for taking part in the ACE Program's Motivation, Assessment, and Planning (MAP) meeting on [Date]. During our meeting, we created an action plan to help you [insert target] in times of stress at school. You set a terrific goal: [insert goal] You thought of great steps for taking action towards reaching your goal, including:

Step	Action	By (date)	Progress		
			None	Some	Completed
1					
2					
3					
4					

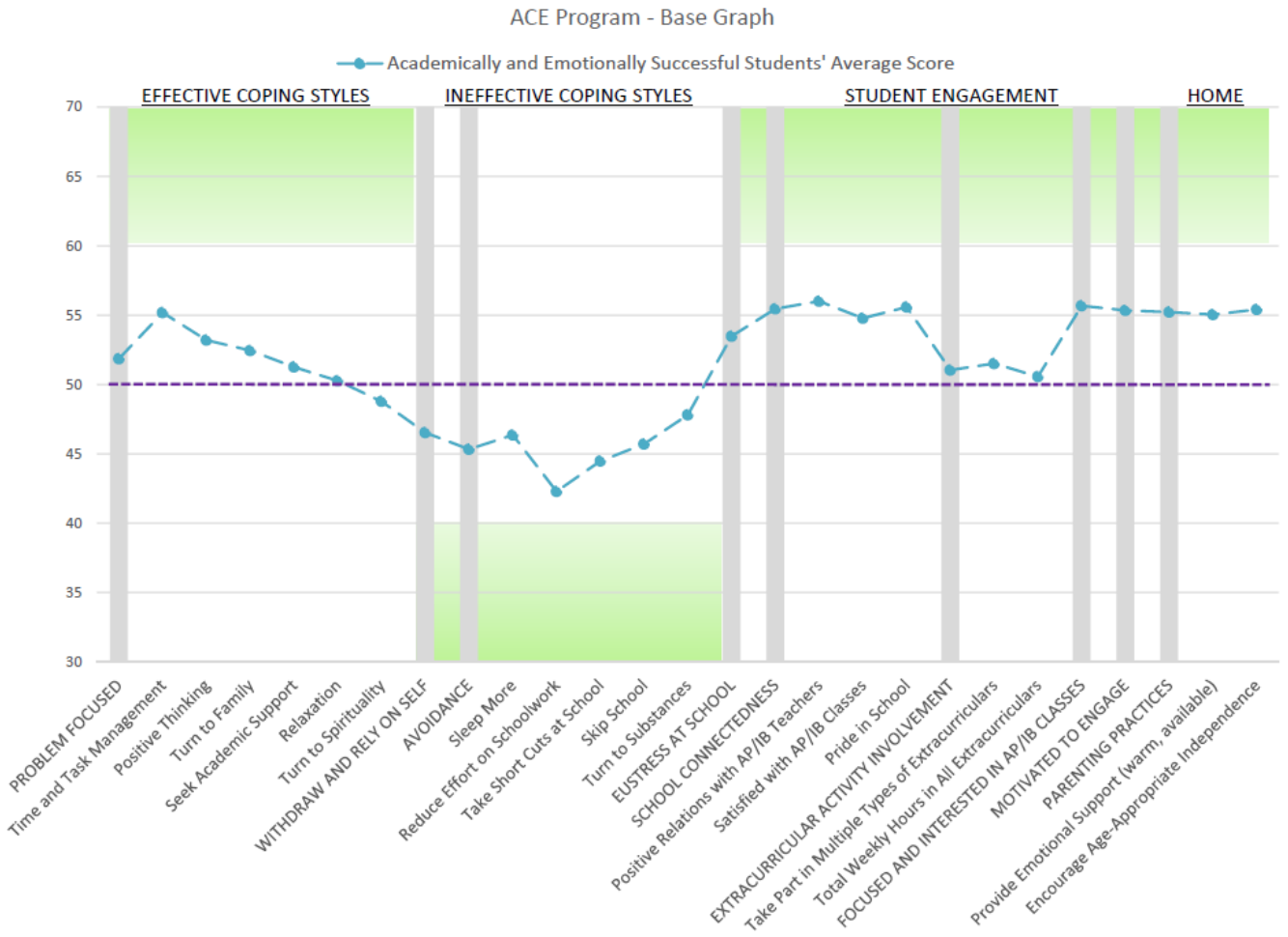
Potential Barrier	Solution

Overall progress on goal: [Insert Goal]

	+2	Much more than expected
	+1	More than expected
	0	Expected level of progress
	-1	Less than expected
	-2	Much less than expected

Item	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. I made progress on the goal I identified with my coach.	SD	D	N	A	SA
2. I made changes in my behavior based on the last meeting.	SD	D	N	A	SA

Appendix D: Student Base Graph



Appendix E: MAP Meeting Protocol

Motivation, Assessment, and Planning (MAP) Meeting Protocol Overview

Session Goals, in line with Motivational Interviewing (MI) processes (Miller & Rollnick, 2013)

1. **Engage:** Establish a positive alliance with the student through (1) a review of the meeting goals and objectives, (2) exploration of the student's character strengths, values, and goals, and (3) discussion of the student's primary reasons for positive change. Use reflective listening, simple and complex reflections, and affirmations as the student share his/her strengths, values, hopes, and aspirations for the future.
2. **Focus:** Discuss student's relative strengths and weaknesses on the factors associated with success among AP/IB students (school engagement and use of coping styles), and offer normative feedback information using the Elicit-Provide-Elicit cycle. Elicit student's own perceptions of these comparisons. Use complex reflections to (a) affirm strengths, and alignment with values and hopes/aspirations for the future, and (b) develop discrepancy between *current status* on behaviors predictive of AP/IB student success and *student's long-term goals, values, and expressed desire for academic and emotional health* while in AP/IB. Prioritize target behavior to discuss further.
3. **Evoke:** Pose questions that elicit change talk, such that the student (not you) is voicing their desire, ability, reasons, and need for positive change on the factors the student wants to address further. Use simple and complex reflections to mirror back the student's change talk and nurture their motivation to take action.
4. **Plan:** Collaboratively develop an action plan that addresses "how" and ""when" the student will enact the behaviors they voiced to be associated with their success. Mobilize the student's self-proclaimed goals regarding school engagement and use of coping styles by reflecting continued change talk and affirming their ideas for making a lasting change. Increase students' confidence in their ability to enact their plan and meet their goals by linking their action steps to their strengths, values, hopes, and aspirations for the future. Ideally by the end of planning the student will be able to voice their commitment to making a change in their academic and emotional functioning.

Throughout your discussion, remember to meet the spirit of MI:

- ***Cultivate change talk*** through evoking the student's own language in favor of the change goal, and confidence for making that change.
- ***Soften sustain talk*** by avoiding a focus on the reasons against changing or for maintaining the status quo.
- Convey ***partnership*** with and ***autonomy*** for the student by expressing an understanding that the expertise and wisdom about the change resides mostly within the student.
- ***Accept*** the student's worldview and convey ***empathy*** by making every attempt to grasp the student's perspective and experience.

Use core MI communication skills throughout the meeting:

- Use ***reflective listening*** by giving the student your undivided attention to establish trust and show your interest in understanding their current situation.
- Use ***simple and complex reflections*** frequently and focus on your depth in the reflections to add meaning to the student's language, especially their change talk.
- Ask ***open-ended questions*** that elicit personal reflections and elaborations, and follow them up with reflective listening to ensure the student feels heard and understood.
- Use ***affirmations*** to convey empathy, support, and encouragement of the student's personal strengths, resources, and positive efforts.
- Intersperse ***summaries*** to highlight connections between statements the student shares, as well as help transition a student to the next step of the meeting.
- Help student generate own ideas for change strategies; if appropriate, ***offer*** information (avoid being the expert) using the Elicit-Provide-Elicit cycle.

Materials Needed

- **Session 1**
  - Student-specific information:
    - Character Strengths and Values Discovery results from ACE Student mod. 12
    - Completed assessment packet (current status on factors associated with AP/IB student success) if student queries what item responses led to scores on a given factor
    - Score report/profile (created using the norms for large sample of AP/IB students) on the assessment of factors associated with AP/IB student success
  - Blank score report/profile (base graph), for use prior to sharing student-specific report
  - AP/IB Student Success Planning Form
  - Colored Pencils or Markers (red, yellow, green)
  - ACE Student Program binder, to access handouts and worksheets as appropriate during planning step
- **Additional materials needed for session 2**
  - Progress towards ACE program goal letter

Meeting Timeline

MI Step	Activities, Strategies, and Objectives	Approximate Length
Step 1: Engage	• Introduction/Re-introduction to coach and meeting purpose. • *Session 2 only*: Review progress towards goal • Review values, strengths, hopes, and goals for the future. • Summarize how student's background fits with ACE targets	10 minutes
Step 2: Focus	• Elicit student knowledge of areas related to academic and emotional success. • Orient/re-orient student to norm-referenced feedback graph and review individualized graph with student. • Develop discrepancy between student's weaknesses and comparison groups and/or personal goals. • Agenda map and prioritize area(s) of change	15-20 minutes
Step 3: Evoke	• Pose evocative questions that elicit change talk • Reinforce any change talk with OARS.	5 minutes
Step 4: Plan	• Collaboratively brainstorm strategies for meeting goals using Problem-Solving Process in Action form. • Create an action plan that specifies action steps, supports needed, and a timeline. • Increase hope and confidence in making change.	10 minutes

MAP MEETING STEP 1: ENGAGE

Time: Approximately 10-15 minutes

Purpose: Establish a positive alliance with the student through (1) a review of the meeting goals and objectives, (2) exploration of the student's strengths, values, goals and aspirations for the future, and (3) to discuss the student's primary reasons for positive change.

Part 1: Introduction to Coach and Meeting Purpose

- Share name and affiliation; ask student how they prefer to be addressed.
  - ***Meeting 1:*** *Hi* [Name] *it's really good to see you again. As you know, I am* [Name] *from the ACE Program. I wanted to thank you for your participation in the ACE program – you seem to be working hard to be successful in what I am sure are difficult AP/IB courses – good for you!*
  - ***Meeting 2:*** *Hi* [Name] *it's really good to see you again. As you know, I am* [Name] *from the ACE Program. I wanted to thank you for your participation in our last meeting. I couldn't wait to talk with you again as I was so impressed by the goals you shared with me in our last meeting. I was so proud of how you took advantage of our time together to consider how you're doing in AP/IB. I enjoyed working with you to develop an action plan for how you might do even better in AP/IB, through coping with stress or engaging at school differently.*
- Gauge understanding of meeting and explain reason for meeting with them individually.
  - *What is your understanding of why we are meeting today?*
  - ***Meeting 1:*** *Thanks for sharing your expectations for this meeting! I'd be happy to share a little more with you. As part of the ACE Program we offer students extra support through one-on-one meetings like this one, which we call MAP meetings. We've worked with lots of AP/IB students, and have learned what helps them do well academically and stay relatively happy in the process. The MAP meetings are intended to help you succeed in AP/IB. We are offering this extra support to lots of students, including some with room for growth in happiness at school, stress management, or grades.*
  - ***Meeting 2:*** *Thanks for sharing your expectations for this meeting! My hope for us today is that we can review the goal that you made in our last meeting, and see how your plan is going so far. Please honestly share how that plan went, so we can trouble shoot, celebrate, or make a new plan- wherever you're at I'm just excited to catch up!*
- Share meeting agenda (Student Success Planning Guide p. 1)
  - ***Meeting 1****: In the rest of this hour* (point to agenda)…
    1. *I am looking forward to learning about your personal strengths and values, and how you're doing with reaching your goals for the future.*
    2. *I will also share where you stand relative to other students in Florida on the factors that are linked to success in AP/IB as you've heard about in the ACE program in your class.*
    3. *And if you're willing, I would like to work with you to develop a plan for how you may boost your chances for doing well in your AP/IB class(es), by targeting an area through the course of our discussion you come to feel might*

be most central to helping you achieve your goals. What questions do you have about this process?

- ***Meeting 2:*** *In the rest of this hour* (point to agenda)…
    1. *I will review the personal goal you made during Meeting 1 and discuss any progress you've made since the first meeting.*
    2. *I am looking forward to learning about your personal strengths and values, and how you're doing with reaching your goals for the future.*
    3. *I will also revisit where you stand relative to other students in Florida on the factors that are linked to success in AP/IB as you've heard about in the ACE program in your class.*
    4. *And if you're willing, I would like to work with you to develop a new plan for how you may boost your chances for doing well in your AP/IB class(es), by targeting an area through the course of our discussion you come to feel might be most central to helping you achieve your goals. What questions do you have about this process?*
- *I am recording this meeting because it will help me do my best with you. The MAP meetings are part of a research project, and members of the research team will review the audio file to make sure I'm doing a good job. The file will not be shared with anyone at your school, and my research team will destroy it as soon as our project is complete. Are you okay with this?*

IF THIS IS MEETING 1, skip the following steps and proceed to *Part 2: Review values, strengths, hopes, and aspirations for the future*
IF THIS IS MEETING 2, proceed with the following steps.

Review students' goal from Meeting 1

- Restate goal written on Student Success Planning Guide if student has trouble remembering.
    - *In our meeting last month, we talked a great deal about how you may boost your chances for doing well in your AP/IB class(es) by targeting a factor on the graph you felt might be most central to helping you be successful. Tell me your understanding or recollection of the goal you made last time we met?*
- Elicit student change talk through a review of importance of attaining initial goal. Reinforce any change talk through **simple and complex reflections.**
    - *Why was* [restate goal] *something you wanted to work on?*
    - Example reflections:
        - *You saw talking to your teachers, in particular your math teacher, as being crucial to being successful in your IB program.*
        - *Making a list of your upcoming assignment is something you identified as important.*
- Ask **open-ended questions** to encourage student to elaborate on the importance on change:
    - *What benefits come from talking to your math teacher in times of stress?*
    - *Why did you think* [insert goal] *would be helpful?*

Discuss Current Progress towards Target/Goal

- Bring out Progress towards ACE Program Goal letter to remind student of their specific goal and action steps identified in Meeting 1.
    - *In our last meeting, we brainstormed ways to make that goal happen. I handed/sent a card to you a few weeks ago with a reminder of the plan we created to help you reach that goal.*
    - *Tell me all about how you feel your progress towards your goal is coming along, like what steps, if any, you have taken? Some students I've spoken to this week said, "Man, I totally forgot all about it," while other students completed part of the plan or told me about the many steps they completed.*
- While student discusses progress made with change plan, mark *none*, *some*, or *completed* next to each action step listed on their "Progress Towards ACE Program Goal" form.
    - Enhance students' confidence and hope (see Part 4 of Step D- Plan)
- Ask the questions listed in one of the 2 boxes below based on the student's reported progress towards their goal.
    - Box 1: If student reports making LITTLE to NO PROGRESS toward goal
    - Box 2: If student reports making SOME to A LOT OF PROGRESS toward goal

Box 1: If student reports making LITTLE to NO PROGRESS toward goal

- Make **empathetic statements** that communicate understanding.
  - *You have faced a lot of challenges this past month, both at school and at home, that have kept you from sticking to this plan.*
- Ask **open-ended questions** to evoke any steps the student may have taken towards reaching their goal. **Affirm** and reinforce any steps the student has taken.
  - *Tell me about any steps you've taken so far to improve or even keep stable your* [target].
- **Evoke examples** and details regarding any barriers the student may have faced. Follow up by expressing understanding through **simple and complex reflections**.
  - *You made some headway on improving your time and task management by getting a planner, and found it tiresome to continue using the planner week after week and stopped. Practicing new habits can be very challenging, but I commend you for trying something out, even if it was for a brief period of time!*
- **Evoke potential benefits** of working to manage and overcome the expressed barriers. Yoke any positive improvements in academic/emotional status to change efforts for the target, as well as any potential declines in academic/emotional status to lack of change efforts.
  - *Even though you found using a planner burdensome, you also felt like it was easier to remember your assignments and their due dates when you wrote everything down. How might continued use help with your academic/emotional success?*
  - *It was really challenging for you to keep a positive mindset when faced with multiple tests and assignments. You also realized your negative thinking before a test got in the way of you feeling confident about your performance.*

Box 2: If student reports making SOME to A LOT OF PROGRESS toward goal

- **Affirm** student's ability to make progress on their goal.
  - *It's clear you took your goal of improving your time and task management very seriously as demonstrated by all the progress you've made!*
- Ask **open-ended questions** to evoke the steps taken towards reaching their goal. **Affirm** and reinforce steps the student took towards accomplishing their goal.
  - *Tell me about the steps you've taken so far to improve your* [target].
  - *For example, what did yesterday after school look like for you as you applied your plan to "stop procrastinating."*
  - *What does the future hold if you continue sticking to this plan like that?*
- **Evoke examples** and details regarding progress. Highlight these efforts through **reflections** and **affirmations**.
  - *How were you able to ask for help from your teacher?*
  - *Tell me more about what allowed you to be successful this time around.*
  - *Who, if anyone, helped you make this progress?*
- **Evoke potential benefits** of working to manage and overcome the expressed barriers. Link positive improvements in academic/emotional status to change efforts for the target.
  - *Since you started making progress on your plan, what changes (either academically or emotionally) have you seen in yourself?*
  - [After student describes academic gains]: *Wow, you've raised your C to a B in only 1 month. And what changes in your mood and stress have you seen?*

- [After student describes emotional improvements]: *Wow, you are feeling more confident, less stressed, happier, more social since making those changes. And what changes in your work completion, grades/test scores have you seen?*

- Yoke positive improvements in academic/emotional status to change efforts for the target through **complex reflections** and **affirmations**.
  - *These efforts are helping you make progress toward reaching* [insert goal], *which has helped you get your work done on time and be better prepared for tests!*
  - *The strengths you've shared with me helped you face barriers as you enacted your change plan! Your efforts are clearly paying off in your lighter mood, too; the way you're taken control of your stressors is inspiring to witness.*

Summarize Your Understanding of the Student's Current Progress toward Goals

- Provide a **transition summary** by compiling your understanding of the student's current situation and transition to focus – for example:
  - [Student making little progress] *Since I've seen you last, you've continued to use your strengths of perseverance and open-mindedness, as well as support from family and friends to help you reach your long-term goal of going to college. When we last met you set a goal of becoming involved in three extracurricular activities at your school. However, this was complicated by transportation and not feeling confident in your ability to make the team. For all of us it's quite challenging to change our situation and try new things, so I commend you for starting the process and acknowledging the setbacks you've faced.*
  - [Student making good progress] *Since I saw you last, you have used some of your strengths of humor and kindness to feel more connected to people in your IB classes. That's great, because you view success in IB classes as necessary to be optimally prepared for pursuing your goal of graphic design in college. It sounds like you've made quite a bit of progress towards the goal you set of seeking academic support from your Inquiry Skills Teacher when stressed! You are participating more in class, asking him for homework help after class, and even contacting him via Edsby after your grades were posted. You've seen a change in your grades in class, happiness with life, and overall confidence and satisfaction with the class since enacting your plan.*

Part 2: Review values, strengths, hopes, and aspirations for the future

- Be transparent about direction of session.
    - ***Meeting 1****: I want to thank you for coming by earlier to complete that packet of questionnaires that* [USF research team member] *gave you. I've looked it over, and I'll have some questions to ask you later.*
    - ***Meeting 2****: I want to thank you for coming back for a second meeting. Since we have discussed your progress towards goal, I'd love the opportunity to spend the rest of our time brainstorming a plan to further enhance your emotional health and academic success in AP/IB by revisiting the coping or engagement targets you feel make sense to strengthen. Before that, I'd actually like to know you a little better.*
- Transition to values, strengths, and goals by asking about things of importance.
    - *Right now I'd like to get to know your values, personal strengths, and goals for the future. What are the most important things in your life right now?*
- Review previously identified values and strengths [Student Success Planning Guide p. 2]. Use **simple and complex reflections** to follow-up the student's responses, and link current and future goals to values and strengths.
    - *I have here the results of the personal values discovery and character strengths identification activities and that you completed earlier. I wonder if you might review these with me.*
    - *You identified* [insert values here] *as the most important to you.*
        - If links between opening question (things of importance) and sorted values not clear: *Tell me more about the value that might be the most important to you, in other words the guiding principle/belief that matters most to you. How would others say you exemplify this value?*
    - *You identified your character strengths as* [insert strengths here]. *Tell me more about one of these strengths that the people closest to you would describe as best capturing what makes you special.*
    - Jot down additional value(s) and strength(s) that emerge during the conversation.
- Discuss student's long-term goals using **open-ended questions** and reflect back using **simple and complex reflections.** Link back to strengths and values when possible.
    - *Tell me what you see yourself doing after high school.*
    - *How might your strengths help you attain your goals?*
    - *How might your values affect your future life (career, family life, etc.)?*
- Ask **open-ended questions** to help the student make the connection between their goals and values with academic and emotional success in AP/IB. Follow up any expression of hopes or future plans with **complex reflections** to identify and affirm the strengths, values, and goals expressed by the student.
    - *Bringing it back to the here-and-now, how does being successful in AP/IB classes- both academically and emotionally- fit in with your goals and values?*
    - *Being in an AP class (IB program), how does that fit into your future goals?*
- Use a **linking summary** to reflect what the student has just shared and link it to things they shared previously (strengths, values, long-term goals) and amplify any change talk.
    - *You see taking AP classes as challenging you academically, and helping you learn more complex content as well as meet other bright students you might study*

with throughout high school, and that falls in line with what you told me at the beginning of our meeting about your desire to go onto a prestigious college.

- Ask **open-ended questions** to elicit connections between student's short- and long-term goals and their school engagement and use of coping styles. Optional: reference page 2 of the Student Success Planning Guide that lists the coping and engagement factors, when posing questions like:
    - *How might the coping strategies - like positive thinking, seeking support, and time management - you learned in the ACE program* [reference page 2 of planning guide] *help you achieve* [insert short-term class goals or long-term life goals student just shared]?
    - *How might the school engagement strategies – like being connected to your teachers and getting involved in extracurriculars - you learned the ACE program* [reference page 2 of planning guide] *align with your goals?*
- **Affirm** the student's beliefs, intentions, and effort in this area. Connect your affirmation directly to the general goals of the intervention.
    - *Your family obviously supports your school engagement and intentional efforts to cope with the stress of AP classes – what a valuable asset.*
    - *You put forth the extra effort to be organized and seek out support when needed, both of which will really help you manage the academic demands of your AP/IB schoolwork and stay emotionally healthy.*
    - *Your strengths of kindness and wisdom comes through in your motivations for connecting with your IB classmates (to help others with their work when possible); what valuable assets you bring to new relationships!*

Part 3. Summary of student's background

- Provide a **collecting summary** that communicates your understanding of the student's current situation using **complex reflections** to pull together the student's values, strengths, and future goals, while placing **emphasis on any change talk** that the student has brought forth. End with a question that invites the student to add details, comment on the accuracy of your understanding, or ideally elicit more change talk. For example:
    - *Seems like a close knit family and persisting on something you set your mind to do [discovering new things/bravely taking on new challenge] are strengths and values that you associate with doing well in school and coping with all the stressors associated with AP courses. And succeeding in AP classes helps out with your big picture goal- getting into the University of Michigan. You've got a plan, support, and the willingness to make the changes you want in order to make this happen!*
    - *You've moved around a lot in your childhood and shown an amazing ability to make meaningful, lasting connections at school. Some of those connections turned out to be great resources in times of stress. You're now in yet another new school, and have a chance to use your strengths of love, kindness, and perspective again when getting to know new people and becoming more involved in activities. You recognize that getting involved will help you get the most from this IB program that aligns so nicely with your appreciation for critical thinking and global travel. What else, as you think about how the IB program fits in with the future you see for yourself?*

If a student appears disengaged during the engage section, ask yourself*:*

- How comfortable is this student in talking to me?
    - If the student seems visibly uncomfortable (jittery, avoiding eye contact, teary-eyed) or appears defensive say, "*I'm so sorry, I feel like I've caused you to be concerned about our meeting - maybe it was something I said or how I've approached our work together. I want to make sure that you feel as though this is a helpful process- what can I do to help you feel more comfortable?*
- Does this feel like a collaborative partnership?
    - If you find yourself in the expert or question/answer trap attempt to slow speech and provide extra waiting time following open-ended questions and reflections.
    - Have a more global discussion about the student's values, aspirations, etc. that the student shows interest in by asking *"____ does not seem to be of interest, but are there other topics that are important in your life right now?*" or "*What's something you've been considering changing in your life as it relates to school?"*
- How comfortable do I feel in this conversation?
    - If your behavior is related to the disengagement be transparent about your feelings. "*I want to pause for a moment because I'm feeling a little nervous/flustered/distracted right now and it's gotten in the way of me being fully present with you right now. My apologies for that. Do you mind if we start again?*"

MAP MEETING STEP B: FOCUS

Time: Approximately 20-25 minutes

Purpose: Discuss student's relative strengths and weaknesses on the factors associated with success among AP/IB students, and offer normative feedback information using the Elicit-Provide-Elicit cycle. Elicit student's own perceptions of these comparisons.

Part 1 (MAP MEETING ONLY): Elicit student knowledge regarding the areas related to academic and emotional success.

- **Affirm** students' participation in the ACE Student Program. If discussion of ACE targets did not occur during Engage, elicit student's memory of ACE modules.
    - *You've worked a good deal during the ACE modules on the areas related to academic and emotional success – these are listed out on p. 2 of the Student Success Planning Guide. What was the most helpful thing you learned in the ACE Program modules?*
- Elicit student's memory of—and emotions around—the pre-MAP intervention survey. Respond with **simple/complex reflections** dependent upon the student's use of sustain or change talk.
    - *You recently completed a 10-page survey packet that asked you to rate yourself on the factors discussed in the ACE Program. Tell me how it felt to rate yourself in some of these areas.*
    - *What did you learn from completing those surveys?*
- Establish data review process as **collaborative partnership.** Respond with **simple/complex reflections** dependent upon the student's use of sustain or change talk.
    - *I'd like to review/revisit your responses to the survey together now. Many students that we've met with in MAP meetings have appreciated seeing their own results compared to responses from the thousands of other AP/IB students we've surveyed before – how might seeing this comparison be helpful to you?*
    - [OPTIONAL, pending amount of time permitted for the meeting as student writing extends session time somewhat] *Some students find it easier to write down their thoughts in addition to talking. You can use the "AP/IB Student Success Planning Guide" throughout our talk today – if you like – or not, it's up to you. For instance, you can color your personal strengths (higher scores) in green, neutral/average behaviors in yellow, areas for growth (lower scores) can be red. Also, you can mark on this graph with colors, like circle your strengths in green.*

Part 2: Orient/re-orient student to norm-referenced feedback graph (*limit to 2 minutes)

- Present the base graph (without the student's data included) to orient the student to factors presented on the X axis, and mean scores among comparison groups. Use a blank sheet of paper to show small portions of the graph if student seems overwhelmed.
- *We have organized the graph into four areas:*
    1. *The first area focuses on **Effective Coping Styles**, which includes coping styles like time and task management and positive thinking. If you think back to the "Coping Chart" we shared with your class, these styles were associated with higher academic achievement and emotional well-being. Because higher scores*

here tended to co-occur with better academic and emotional wellness among AP/IB students in prior research, there is gray shading above the midline to indicate the direction of scores that may be most healthy (point to gray section; before the meeting, the coach can use green colored pencil or crayon to add color to the gray section, and refer to "green" rather than "gray" throughout).

2. *The second area focuses on **Ineffective Coping Styles,** which includes behaviors research suggests to limit, like withdrawing and relying on self when faced with stress, and various forms of avoidance. Because lower scores here co-occurred with better academic and emotional wellness among AP/IB students in prior research, the gray shading is below the midline here* (point to gray section).

If Student has Significant Elevations in Ineffective Coping Styles:

Reduce stigma through acknowledgement of AP/IB students' use of these factors.

- *Researchers have an understanding of what these terms mean, but different people have a different reaction to these labels- do you have a strong reaction to any of them? Like what does "taking short cuts" mean to you?*
- *Lots of students report they feel unable to stay on top of their schoolwork unless they swap notes or divvy up assignments with classmates (which falls under "Taking Short Cuts" because it often goes with other stress reactions like copying other students' work)*
- *Many students may give in to the exhaustion for a bit by taking naps, or going to sleep early to either recharge or escape (which fall under "Sleep More").*
- *But such coping styles are listed here within "Ineffective" based on research*

3. *The third area focuses on **Student Engagement**, which includes things like involvement in extracurricular activities and school connectedness. Again, higher scores (closer to the gray area) are linked to better outcomes for most students.*
4. *The last area deals with things at **Home,** such as your perceptions of your parents' emotional warmth and support, and how much they promote your independence. Higher scores here* [point to gray] *are also often associated with better academic and emotional outcomes for students.*

In the event the target student's scores within positive parenting practices are low:

- *When we talked with your class about factors research has shown predict success in AP/IB, we noted successful students tend to perceive their parents support them and also promote their independence..*
- *Our ACE program in the classroom focused on the first 3 areas because these are things more within students' personal control to work with us to change or improve.*
- *However, in these individual meetings, we offer students complete feedback on how their levels of factors related to student success map on to typical levels reported by lots of AP/IB students.*
- *This section of the graph is not an exhaustive look at all parenting practices, family factors, or parent-child relationship issues, but a focused look at two aspects of authoritative parenting practices (warmth/support, autonomy*

- Explain gray and white columns of graph
    - *These gray bars represent overall scores in broad categories, such as levels of coping with school-related stressors through Problem-Focused strategies or Avoidance strategies, levels of School Connectedness, levels of Extracurricular Activities, etc.*
    - *The white columns that follow a gray bar give levels of more specific coping styles and behaviors within a particular category. For example, effective coping styles such as time and task management, positive thinking, and turning to family are all placed in the Problem Focused Coping category.*
- Explain the two comparison groups on graph
    - *There are also two points of comparison for you. You can compare your scores to: (1) The average responses of over 2,300 AP/IB students that we previously surveyed, which is represented by the (purple) dashed line across the middle of the graph* (before the meeting, the coach can trace over this dashed line with a purple marker, and refer to "the purple line" for the average AP/IB student).
        - Optional explanation: This is the mathematical average score from the students in the sample on each factor. It is not indicative of how the average student in the sample performed academically or was doing emotionally; just the most common score on a given variable across 2300 students from 20 different AP or IB programs.
    - *(2) A subgroup of a few hundred students who are particularly successful both academically (high GPAs and test scores) and emotionally (happy, not burnout at school or emotionally distressed). The average score within this group is reflected in the (blue) dashed line that runs above and below the average score* (before the meeting, the coach can trace over this dashed line with a blue marker, and refer to "the blue line" to reference particularly successful AP/IB students).

Facilitator Note:
Student responses to survey packet entered into a scoring program and compared against the responses of 2,300+ other AP/IB students from 20 FL high schools (mean score = 50, as reflected in the dashed line). **S**uccessful subgroup = top 10% of norm sample that met all indicators of emotional success (high life satis-faction, no mental health problems, low school burnout) and academic success (GPA > 3.0, passing scores on end-of-course AP/IB exams).

- Check for understanding and expectations.
    - *What questions do you have about the information in this graph?*
- Transition to a focus on the student's own scores (levels)
    - [OPTIONAL] Pose in the event the question "*how might seeing this comparison be helpful to you"* (page 7) was not explored earlier.
        - *How might seeing your levels of engagement and coping compared to the average AP/IB student and students who are academically and emotionally successful be helpful?*
    - [OPTIONAL] Pose in the event a student has not already shared what they think of their status on the various ACE targets during earlier parts of the interview:
        - *What do you expect to see in your scores?*
        - *What areas do you feel are your greatest areas of strength?*
        - *What areas do you feel have the most room for improvement or growth?*

- *Let's walk through a graph that has your scores along with these other two lines of scores, so you can see how your scores compare to other students.*

Part 3a: Review individualized norm-referenced graph with student

- Before the meeting, use a highlighter or orange marker to trace over the student's score line, and refer to "the orange/highlighted line" to reference the student's scores.
- Orient student to their scores on the graph and allow them 1-2 minutes to review their graph and independently identify their personal strengths.
    - *This colored line shows your current level on each factor associated with student success, based on your responses to the 10-page packet you completed. I'd like to offer you a chance to silently look at the graph before we talk about it together.*
    - [OPTIONAL] *As you're reviewing your scores, some students find it helpful to circle their greatest strengths in green and any areas of concern we may want to discuss together in red. I'll give you a few minutes for you to review your graph independently and color on it if you'd like, let me know when you're done processing*.
        - To further reinforce the concept the coach can circle an example of a clear strength (point on graph within or close to green shaded section) in green and clear weakness (point on graph far from green shaded section) in red.
- Review 1-2 student's relative strengths in coping, engagement, and home support (factors in shaded area and/or above comparison line). Respond with **simple and complex reflections and affirmations.** (*try to limit to 3 minutes, vs. 5-7 minutes)
    - *What do you make of… the scores you identified as your strengths? […your scores that are in or closer to the green areas…at/near/above the blue line]?*
    - [OPTIONAL] Point out 1-2 additional relatively high-scoring factors student neglected.
- Transition from strengths to weaknesses. Review 1-2 relative weaknesses and other areas for growth.
    - *Thanks for discussing your coping and engagement strengths with me! Let's turn our attention to areas that indicate room for growth.*
    - [After student self identifies areas for growth] *What do you make of these scores?*
    - *Are there particular areas or categories that are far from the shaded areas that you'd like to talk about in more detail?*

****As student discusses each factor, go through Part 3b (next step) to develop a discrepancy between their score and the comparison groups.****

If student avoids addressing weaknesses or engages to sustain talk:

- Ask for permission to point out 1-2 weaknesses in line with the coach's case conceptualization of what may be a particularly important target to discuss by asking, *would it be ok if we discuss an additional factor on the chart?*
- Factors to point out: (a) particularly low-scoring factor(s) a student should have on his/her radar (i.e., "elephant in the room"), (b) a factor that was suggested as important during the engage process, or (c) a factor that- if improved- is likely to lead to further improvements in other areas.
- As time permits provide information on remaining factors assessed in the selective assessment, by systematically going through the identified variable, unpacking the larger

Part 3b: Develop discrepancy between student's weaknesses and comparison groups and/or personal goals and standards. Elicit reactions, comprehension, and student's interpretation to feedback.

- Ask **open-ended questions** to guide student to make an observation and then **reflect** on their thoughts and feelings regarding a discrepancy (score that reflects a relative weakness).
    - *What do you make of your score, in* [target behavior] *that is kind of far from how other students' scored, or from where you want to be?* OR *When you see your score compared to others students' scores, what goes through your mind?*
    - *How does your* [low/high level of target behavior] *line up with your future plans?*
    - *What popped out to you as an area that has some room for growth and is important for your success?*

Facilitator Note:
Start by ensuring they are interpreting the graph correctly, and understand their target behavior is more/less/ same than a normative sample on the graph OR their own report of observations of "successful" kids at their school. Point to green area or comparison lines depending on which group student has pointed out before.

- **Reflect the discrepancy** between a student's scores and (a) desired levels of functioning in AP/IB and/or (b) personal values and strengths. Bring conversation back to the student personally, i.e., how they think they're doing relative to their personal standard.
    - *You've identified a gap between yourself and* [the sample of successful AP/IB students; the average score; student's personal goals, standards, values] *in relation to* [target behavior].
- Use **simple and complex reflections** to summarize how student's current behavior is affecting their academic performance and **focus on student's change talk.**
    - *How is your current level of* [target behavior] *likely affecting your performance in AP/IB classes?*
    - *How would improvements in that area be in line with the goals and values you shared with me earlier?*
- Provide a **collecting summary** that communicates your understanding of the area(s) the student previously justified that s/he believe would be helpful to focus and improve upon. End with a question that invites the student to add details, comment on the accuracy of your understanding, or ideally elicit more change talk.
- Transition between identified weaknesses.
    - *This sounds like something that is important to you. Is this key to your success and should be the focus for the rest of our meeting, or is there something else you circled in red that you'd like to explore first?*
    - *This sounds like something that is important to you. Let's keep that in the back of our minds for right now, because I want to make sure we have enough time to talk about any other areas where changes might be helpful.*

If the student has clear initial goals and concerns in mind:
If the direction for change is clear to you both, don't spend too much time in this focusing stage. Make sure you're on the same page ("*I want to make sure I'm clear regarding what you think is best for us to work on together – can you share with me again just what you think the priority is?)*

OPTIONAL: Pose additional open-ended questions if student reports little or weak change talk during Part 3b, or had circled additional scores in red in 3a.

- Prompt for discussion of other targets with room for growth:
  - *What's another factor you see on the chart that you notice is kind of far from where you might like it to be?*
  - If student doesn't see anything: *Here's what I noticed, what do you think of that?*
- Gauge student's reactions to relative strengths and weaknesses. Reactions may range from surprise to marked self-awareness of their strengths and challenges.
  - *Does this information match what you expected you would find when completing the survey?*
    - Note: Questions about accuracy of predictions are optional, as prior self-awareness is likely not as crucial as increasing change talk. This type of question, though, might help transition to agenda mapping.

Facilitator Note:
If new target areas are identified return to Part 3b (developing a discrepancy) to elicit their reaction to the data.

Part 4: Agenda mapping; Prioritize areas of change in a way that balances students' autonomy with assessment data

- Label and **affirm** relatively high scores noted.
  - *Thanks for spending that time getting to know you. We have talked about a lot of different things, like your strengths in* [reference targets near green]. *You have a lot of things going well!*
- Give student **autonomy** to identify what factors may be important to maintain/improve/decrease. Make it clear where you're heading for rest of conversation.
  - *You are very insightful, and understand* [list factors identified as having room for growth] *have room for growth. Let's take some time to discuss which issues seem MOST pressing or important to you at the moment.*
- Consider options student circled on the graph and make a list if needed. If student voices a target not discussed already then say:
  - *You saw X and Y on the graph, but Z stands out as the top priority for you.*
- **Offer** additional options as indicated.
  - *Another possibility that occurs to me is* [coach's idea for focus]. *We could consider that as well, or maybe that's for another time.*
- Allow the student to prioritize and select area of focus.
  - *Let's prioritize. What do you think is the most important thing to work on first?*

Facilitator Note:
It's not essential that a student choose to focus on the score with the largest discrepancy. A coach may suspect that targeting a very low score may hold the most obvious path to improvement, but growth on a factor with even a small discrepancy may still serve a promotive effect and align better with the student's values, desires, and perceived abilities (target capable of working on). The difference should be large enough to provide motivation but not so large as to be demoralizing (accompanied by extreme lack of confidence). Target factor must be important + feasible to change.

- Provide a **transitional summary** to evoke.

    - *I'm with you on this, and think that you've identified an area that we can work on together.*
    - Complete Step 1 of the Problem-Solving Process record form. Either the student can complete the form or the coach can complete in a discreet manner if the worksheet might distract from the conversation.
    - *If it's ok with you, I would like us to take some notes while we talk so we capture all the great ideas you have. Would you like to write, or do you prefer that I do?*
- **Partner** with the student to identify a concrete goal and/or replacement behavior, particularly if the student chose to focus on limiting an ineffective coping style. Record the goal in the top part of the Action Plan if desired. Example questions:
    - *How will you know when success in this area has occurred?*
    - *How much school do you want to attend?*
    - *How many uninterrupted hours of sleep do you want to get each night?*
    - *How much of your work do you want to complete independently?*
    - *How many extracurricular activities do you want to get involved in?*
    - *How many hours per week would you like to spend in extracurriculars?*

Part 5: Summarize discrepancy and transition to evoke

- **Affirm** student's ability to identify areas for growth and **summarize** factor identified as an area for change.
    - *Thanks for setting that admirable goal with me. Success in AP/IB and attaining* [future aspirations/values] *is something you hold dear, and you view* [current level of target behavior] *as standing in the way of your hopes and dreams. You're ready to make some changes and use some strategies to address* [target behavior].
- Provide a **transitional summary** to evoke.
    - *I'd like to help you plan how you will do this, but first have a few questions*.

MAP MEETING STEP C: EVOKE

Time: Approximately 5 minutes

Purpose: Pose questions that elicit change talk, such that the student (not you) is voicing the rationale for positive change on the factors you just discussed. Use complex reflections to highlight discrepancy between current and desired status in terms of academic and emotional health, and status on behaviors predictive of those outcomes.

Part 1: Elicit and reinforce change talk

Facilitator Note:
While the student voices their desire, ability, reasons, and need for making a change in their behavior, record big ideas on Step 2 of the Problem Solving Process form ("Determine the Potential Benefits of Addressing those Factors").

- Ask at least two evocative questions to which the student describes their own desire, ability, reasons, and need (DARN) to improve the status of their school engagement or use of coping strategies.
    - **Desire:** *Why is [target behavior] so important to you? (…for success in your AP/IB courses/program)?*
    - **Ability:** *We've discussed a number of your strengths, how can these be helpful in approaching the areas that you've identified?; What strengths and powers do you have in yourself that might help you [target behavior]?*
    - **Reasons:** *What are the three best reasons for making a change to [target behavior]?*
        - If client responds with only 1 or 2 reasons for making a change then reflect this change talk and do not continue pressing for more reasons.
    - **Need:** *What do you suppose the future holds if you are 100% successful in [target behavior]?* OR *What is the worst thing that can happen if you don't approach [target behavior]?* Followed quickly by *Ugh, yeah that's no good, what is the best thing that can happen if you do.*
- These questions do not stand alone. When you hear any form of preparatory (DARN) or mobilizing (CAT) change talk, it's important to follow up with a thorough exploration using **complex reflections** and ask **open-ended questions** to gather additional information. Examples of follow-up statements and questions:
    - *Tell me more.*
    - *I'm interested in an example or two.*
    - *What would that look like?*
    - *Wow, I can tell you really thought about this. When you set your mind to something, it's really going to happen.*
    - *You know how you don't want to feel and really want a change.*

Part 2. Following a sufficient amount of change talk, ask a key question.

- Gauge readiness to change the target by using the **importance ruler:**
    - *On a scale of 1-10, how important is it for you to [target behavior] and succeed in your AP class?* and/or *How important is it for you to [target behavior] to stay emotionally well while taking AP classes, like to manage your stress so that you are happy?*
    - *Why are you a* [student's number] *and not a* [number – 2]?

Part 3. Move to planning with a transition summary.

- Provide a **transition summary** that reflects all the key change talk statements voiced by the client in Part 1. For example:
    - *Let me pull together what you just shared before we move onto making a plan of action. Lately you've been feeling a lot of stress in your IB program. You really would like to get along with your IB Biology teacher because you see how a positive relationship with her could help your grades, and also your happiness during that class. When you started disengaging in the class you noticed your grade started to slip, and it was the D on the last test—that really got your attention. You're a pretty resourceful, optimistic person and eager to make a change in how you approach this class. You've overcome struggles like this in the past and believe you can do the same now. Is that about right?*
- Transition to planning.
    - *Sounds like* [target behavior] *is something you want to get started on –What are some ideas/strategies/steps you could take, or have already taken, to help you reach this goal?*

MAP MEETING STEP D: PLANNING

Time: Approximately 15 minutes

Purpose: This stage should culminate in a specific plan of action that targets the areas in need of improvement discussed earlier in the session. Students should (a) express commitment to change, and (b) leave with an action plan. It is important to continue to engage, focus, and evoke throughout this planning process.

Part 1: Elicit and reinforce change talk

- **Affirm** initial ideas regarding steps to take towards positive change.
  - *You've clearly given [some / a lot] of thought to how you want to get started.*
- Introduce **collaborative** problem-solving process.
  - *How do you feel about us working together to create an action plan for those factors you noted you might want to maintain or improve?*
  - *You're the expert on your life so you know what works best. I'm an expert on changing these things, so I might have some ideas to offer.*

Part 2: Help the student brainstorm strategies for meeting goals in prioritized areas using Problem-Solving Process in Action form

- Ask **open-ended questions** to prompt the student to generate alternate solutions for making positive changes with the first target (behavior to maintain or change) and write them down on Step 3 of the Problem-Solving Process form.
  - *What has helped in the past to address that behavior?*
  - *What have you seen work for your classmates or friends?*
  - *How much do you want me to offer some ideas, including some strategies we shared during the ACE Program that have worked for other students?* [Use ACE Program: Potential Strategies Cheat Sheet for ideas]
- While completing Step 3 continue using OARS to gather more details to **reinforce change talk**, and elicit the advantages of those optional strategies that are consistent with change. For example:
  - *You see talking to your teachers, in particular your math teacher, as being crucial to being successful in your IB program. Why?*
  - *So making a list of your upcoming assignment is something you are willing to try. Why might that be helpful?*
  - *What are 1 or 2 of the biggest "pros" of that option?*

Facilitator Note:
Do NOT solicit cons for a potential solution, as focusing on the disadvantages or drawbacks of any potential change essentially serves to elicit sustain talk.

- Encourage student to select the best solution(s) (Step 4 of Problem-Solving Process in Action form).
  - *You came up with some great ideas! Among the solutions you generated, which one(s) would you like to try out?*
- Encourage students to celebrate successful outcomes when this solution works, and to pick a different solution if the outcome is not as positive as planned (Step 5)

Part 3: Create an action plan that specifies action steps, supports needed, and a timeline.

- Complete p.5 of the Student Success Planning Guide (Action Plan) by breaking down the action plan into small, doable steps. Provide **reflections** and **affirmations** throughout this action-planning process, rather than a sole focus on the plan logistics.
    - *The target most important to you is* [reflect student's choice] *and your goal is* [reflect student's choice, while filling in the top column of the Action Plan].
    - *The solution(s) you choose to do are* [reflect student's choice].

Facilitator Note:
Throughout planning, evoke confidence by referring to students' strengths. Display the top of p. 3 as a visually reminder of a student's strengths and values. Integrate the student's strengths and values when reflecting their change talk (e.g., *You are pulling on your strength of creativity and truly thinking outside the box to come up with these ideas; It's so clear your family is important to you, as you've tied them into supporting you on this action plan.)*

- If a concrete goal or replacement behavior was not identified early in the meeting (e.g., end of Focus), set behavioral goal now prior to developing action steps.
    - *I wonder if setting a specific goal would help you to know what you're striving towards. How would your overall goal of* [insert goal] *play out in a typical week?*
    - *How will you know when success in that areas occurs?*
        - *What specific time and task management strategy would you like to focus on?*
        - *How much school do you want to attend?*
        - *How many uninterrupted hours of sleep do you want to get each night?*
        - *How much of your work do you want to complete independently?*
- Ask **open-ended questions** that **evoke mobilizing change talk** through commitment, activation, and taking steps (CAT). After each question pause to **reflect** the action steps the student plans on taking.
    - Preparing: *What would be a first step?*
    - Setting a date: *When could you do that?*
- Ask optional follow-up questions that continue to generate mobilizing change talk
    - Getting more specific: *What would you need to start this?*
    - Evoking change talk: *How confident are you in taking this step?*
    - Asking for commitment: *How committed are you to this change?*
- Complete "Sticking to My Plan" portion of Action Plan by reframing challenges, finding ways for the student to hold themselves accountable, and discussing which supports are needed to accomplish plan.
    - *How can you stick to this plan?*
    - *Who can you share your progress with as you move through this action plan?*
- Complete "Anticipating Bumps in the Road" section of Action Plan by using **confidence ruler** to identify barriers
    - *On a scale of 1-10, how confident are you that you* [describe change specifically]*?*
    - *What is getting in the way of you getting to a* ___ [insert a number one or two higher than the number given]?
    - The answer to the confidence ruler are potential barriers the student currently sees. Use handout and identify strategies for overcoming barriers.
    - *Knowing that this barrier might get in the way, what are some possible solutions to overcome this obstacle?*

Part 4: Increase hope and confidence in change

- Ask **open-ended questions** to evoke/review and elaborate examples of prior successes and efforts/attempts to change. Re-affirm strengths, and boost student's confidence in his/her ability to make the desired change and be successful. If available, reference those success examples shared in "You at Your Best" writing activity from Module 12.
    - *When you've used your strength of open-mindedness before, what did that look like?*
    - *The last time you tried* [specific solution]*, what did you learn through the process?*
- **Reflect change talk** specific to student's ability to make positive change in various areas of life, currently (and not necessarily limited to coping and student engagement) as well as in the past.
    - *Tell me more how you were able to succeed/try* [prior change, success, or effort].
- Affirm **prior efforts to change** and reframe as one step closer to lasting change. Each time someone makes an effort to change, they learn something about change.
- Ask **open-ended questions** regarding the future, and make **complex reflections** that yoke previously stated values and goals to importance and the initial behaviors being elicited.
    - *How are you feeling now that you've made this action plan focused on improving* [target behavior]*?*
- **Summarize** the reasons given by the student that indicate confidence about change.
    - *Increasing your positive thinking is really important to you. You've seen the direct connection between your thoughts and your happiness, and negative thinking hasn't been very helpful to you so far. Not only are you ready to make a change, but you've also thought of some steps you will take today! You're going to start a gratitude journal, put reminders of your favorite uplifting quote by your laptop, and spend more time with your family who are positive influences in your life. You're ability to think creatively and be open-minded shines through in the plan you developed. Earlier this year, your strengths helped you transition successfully to this new school environment, and make friends with other students in theater. You've got a plan and the resources to make the changes you want!*

Part 5: Increase commitment in change and end the meeting

- Ask student to sign the final page of the planning form if he or she is sufficiently confident to commit to enacting the change plan- with the desired level (if any) of support from the ACE coach.
    - Example support 1: Offer to drop off a letter to student in a few weeks (or later) that summarizes the action plan developed in this first meeting.
    - Example support 2: Offer student a second meeting with the coach in order to provide an opportunity for follow-up re: progress to plan. If the student agrees to the second meeting, decide on a timeline for the meeting.
    - *This last page is the 'commitment' page where we both make a commitment on the work we've done today. On your end you are committing to try your best to follow through on the action plan you created. You don't have to be perfect, but make an attempt to use the strategies you came up with to reach your goal of* [insert goal]*. On my end, I'm committing to 2 things: One I'm going to be the person rooting for you behind the scene, silently cheering for you from the sidelines. Two, I'm also*

offering to meet with you again a month from now to check in on your action plan. We can celebrate any successes you've made and problem solve any barriers you've faced. How does that sound?

- Coach also signs, demonstrating collaboration.
- Arrange for a paper or electronic copy (e.g., taking photo of the plan with their phone) of the action plan to be provided to the student.

Appendix F: AP Meeting Protocol

Action Planning Meeting Protocol Overview

Materials Needed

- **Session 1**
  - Student-specific information:
    - Completed assessment packet (current status on factors associated with AP/IB student success) if student queries what item responses led to scores on a given factor
    - Score report/profile (created using the norms for large sample of AP/IB students) on the assessment of factors associated with AP/IB student success
  - Blank score report/profile (base graph), for use prior to sharing student-specific report
  - AP/IB Student Success Planning Form
  - Colored Pencils or Markers (red, yellow, green)
  - ACE Student Program binder, to access handouts and worksheets as appropriate during planning step
- **Additional materials needed for session 2**
  - Progress towards ACE program goal letter

Meeting Timeline

MI Step	Activities, Strategies, and Objectives	Approximate Length
Engage	• Introduction/Re-introduction to coach and meeting purpose. • *Session 2 only*: Review progress towards goal	5-10 minutes
Focus	• Orient/re-orient student to norm-referenced feedback graph and review individualized graph with student. • Agenda map and prioritize area(s) of change	10-15 minutes
Plan	• Brainstorm strategies for meeting goals using Problem-Solving Process in Action form. • Create an action plan that specifies action steps, supports needed, and a timeline.	15-20 minutes

AP MEETING STEP 1: ENGAGE

Time: Approximately 5-10 minutes

Purpose: Review meeting goals and objectives

Introduction to Coach and Meeting Purpose

- Share name and affiliation; ask student how they prefer to be addressed.
  - ***Meeting 1:*** *Hi* [Name] *it's really good to see you again. As you know, I am* [Name] *from the ACE Program. I wanted to thank you for your participation in the ACE program!*
  - ***Meeting 2:*** *Hi* [Name] *it's really good to see you again. As you know, I am* [Name] *from the ACE Program. I wanted to thank you for your participation in our last meeting. I couldn't wait to talk with you again!*
- Gauge understanding of meeting and explain reason for meeting with them individually.
  - *What is your understanding of why we are meeting today?*
  - ***Meeting 1:*** *Thanks for sharing your expectations for this meeting! I'd be happy to share a little more with you. As part of the ACE Program we offer students extra support through one-on-one meetings like this one. We've worked with lots of AP/IB students, and have learned what helps them do well academically and stay relatively happy in the process. The meetings are intended to help you succeed in AP/IB. We are offering this extra support to lots of students, including some with room for growth in happiness at school, stress management, or grades.*
  - ***Meeting 2:*** *Thanks for sharing your expectations for this meeting. My hope for us today is that we can review the goal that you made in our last meeting, and see how your plan is going so far. Please honestly share how that plan went, so we can celebrate/trouble shoot and make a new plan- wherever you're at I'm just excited to catch up!*
- Share meeting agenda (Student Success Planning Guide p. 1)
  - ***Meeting 1:*** *In the rest of this hour* (point to agenda)…
    4. *I will share where you stand relative to other students in Florida on the factors that are linked to success in AP/IB as you've heard about in the ACE program in your class.*
    5. *I would like to work with you to develop a plan for how you may boost your chances for doing well in your AP/IB class(es), by targeting an area through the course of our discussion you come to feel might be most central to helping you achieve your goals. What questions do you have about this process?*
  - ***Meeting 2:*** *In the rest of this hour* (point to agenda)…
    1. *I will review the personal goal you made during Meeting 1 and discuss any progress you've made since the first meeting.*
    2. *I will revisit where you stand relative to other students in Florida on the factors that are linked to success in AP/IB as you've heard about in the ACE program in your class.*
    3. *I would like to work with you to develop a new plan for how you may boost your chances for doing well in your AP/IB class(es), by targeting an area through the course of our discussion you come to feel might be most central to*

helping you achieve your goals. What questions do you have about this process?

- *I am recording this meeting because it will help me do my best with you. The meetings are part of a research project, and members of the research team will review the audio file to make sure I'm doing a good job. The file will not be shared with anyone at your school, and my research team will destroy it as soon as our project is complete. Are you okay with this?*

IF THIS IS MEETING 1, skip this box and proceed to Step 2: Focus.
IF THIS IS MEETING 2, proceed with the following steps in the box, then skip to part 2: Orient/re-orient student to norm-referenced feedback graph in Step 2: Focus.

- Review student goal from Meeting 1. Restate goal written on Student Success Planning Guide if student has trouble remembering.
  - *In our meeting last month, you mentioned that [insert value] was very important to you. Tell me more about that.*
  - *We also talked a great deal about how you may boost your chances for doing well in your AP/IB class(es) by targeting a factor on the graph you felt might be most central to helping you be successful. Tell me your understanding or recollection of the goal you made last time we met?*
- Bring out Progress towards ACE Program Goal letter to remind student of their specific goal and action steps identified in Meeting 1.
  - *In our last meeting, we brainstormed ways to make that goal happen. I handed/sent a card to you a few weeks ago with a reminder of the plan we created to help you reach that goal.*
  - *Tell me all about how you feel your progress towards your goal is coming along, like what steps, if any, you have taken? Some students I've spoken to this week said, "Man, I totally forgot all about it," while other students completed part of the plan or told me about the many steps they completed.*
- While student discusses progress made with change plan, mark *none*, *some*, or *completed* next to each action step listed on their "Progress Towards ACE Program Goal" form.
- **Summarize** Your Understanding of the Student's Current Progress toward Goals and provide a **transition summary** by compiling your understanding of the student's current situation.

AP MEETING STEP 2: FOCUS

Time: Approximately 10-15 minutes

Purpose: Discuss student's relative strengths and weaknesses on the factors associated with success among AP/IB students.

Part 1: Elicit student knowledge regarding the areas related to academic and emotional success.

- Elicit student's memory of ACE modules.
    - *You've worked a good deal during the ACE modules on the areas related to academic and emotional success – these are listed out on p. 2 of the Student Success Planning Guide. What was the most helpful thing you learned in the ACE Program modules?*
- Elicit student's memory of the pre-meeting intervention survey.
    - *You recently completed a 10-page survey packet that asked you to rate yourself on the factors discussed in the ACE Program.*
- Establish data review process as **collaborative partnership.**
    - *I'd like to review/revisit your responses to the survey together now. Many students that we've met with in meetings have appreciated seeing their own results compared to responses from the thousands of other AP/IB students we've surveyed before.*
    - [OPTIONAL, pending amount of time permitted for the meeting as student writing extends session time somewhat] *Some students find it easier to write down their thoughts in addition to talking. You can use the "AP/IB Student Success Planning Guide" throughout our talk today – if you like – or not, it's up to you. For instance, you can color your personal strengths (higher scores) in green, neutral/average behaviors in yellow, areas for growth (lower scores) can be red. Also, you can mark on this graph with colors, like circle your strengths in green.*

Part 2: Orient/re-orient student to norm-referenced feedback graph (*limit to 2 minutes)

- Present the base graph (without the student's data included) to orient the student to factors presented on the X axis, and mean scores among comparison groups. Use a blank sheet of paper to show small portions of the graph if student seems overwhelmed.
- *We have organized the graph into four areas:*
    5. *The first area focuses on **Effective Coping Styles**, which includes coping styles like time and task management and positive thinking. If you think back to the "Coping Chart" we shared with your class, these styles were associated with higher academic achievement and emotional well-being. Because higher scores here tended to co-occur with better academic and emotional wellness among AP/IB students in prior research, there is gray shading above the midline to indicate the direction of scores that may be most healthy* (point to gray section; before the meeting, the coach can use green colored pencil or crayon to add color to the gray section, and refer to "green" rather than "gray" throughout).
    6. *The second area focuses on **Ineffective Coping Styles,** which includes behaviors research suggests to limit, like withdrawing and relying on self when faced with*

stress, and various forms of avoidance. Because lower scores here co-occurred with better academic and emotional wellness among AP/IB students in prior research, the gray shading is below the midline here (point to gray section).

If Student has Significant Elevations in Ineffective Coping Styles:

Reduce stigma through acknowledgement of AP/IB students' use of these factors.

- *Researchers have an understanding of what these terms mean, but different people have a different reaction to these labels- do you have a strong reaction to any of them? Like what does "taking short cuts" mean to you?*
- *Lots of students report they feel unable to stay on top of their schoolwork unless they swap notes or divvy up assignments with classmates (which falls under "Taking Short Cuts" because it often goes with other stress reactions like copying other students' work)*
- *Many students may give in to the exhaustion for a bit by taking naps, or going to sleep early to either recharge or escape (which fall under "Sleep More").*
- *But such coping styles are listed here within "Ineffective" based on research*

7. *The third area focuses on **Student Engagement**, which includes things like involvement in extracurricular activities and school connectedness. Again, higher scores (closer to the gray area) are linked to better outcomes for most students.*
8. *The last area deals with things at **Home,** such as your perceptions of your parents' emotional warmth and support, and how much they promote your independence. Higher scores here* [point to gray] *are also often associated with better academic and emotional outcomes for students.*

In the event the target student's scores within positive parenting practices are low:

- *When we talked with your class about factors research has shown predict success in AP/IB, we noted successful students tend to perceive their parents support them and also promote their independence..*
- *Our ACE program in the classroom focused on the first 3 areas because these are things more within students' personal control to work with us to change or improve.*
- *However, in these individual meetings, we offer students complete feedback on how their levels of factors related to student success map on to typical levels reported by lots of AP/IB students.*
- *This section of the graph is not an exhaustive look at all parenting practices, family factors, or parent-child relationship issues, but a focused look at two aspects of authoritative parenting practices (warmth/support, autonomy*

- Explain gray and white columns of graph
  - *These gray bars represent overall scores in broad categories, such as levels of coping with school-related stressors through Problem-Focused strategies or Avoidance strategies, levels of School Connectedness, levels of Extracurricular Activities, etc.*
  - *The white columns that follow a gray bar give levels of more specific coping styles and behaviors within a particular category. For example, effective coping*

styles such as time and task management, positive thinking, and turning to family are all placed in the Problem Focused Coping category.

- Explain the two comparison groups on graph
  - *There are also two points of comparison for you. You can compare your scores to: (1) The average responses of over 2,300 AP/IB students that we previously surveyed, which is represented by the (purple) dashed line across the middle of the graph* (before the meeting, the coach can trace over this dashed line with a purple marker, and refer to "the purple line" for the average AP/IB student).
    - Optional explanation: This is the mathematical average score from the students in the sample on each factor. It is not indicative of how the average student in the sample performed academically or was doing emotionally; just the most common score on a given variable across 2300 students from 20 different AP or IB programs.
  - *(2) A subgroup of a few hundred students who are particularly successful both academically (high GPAs and test scores) and emotionally (happy, not burnout at school or emotionally distressed). The average score within this group is reflected in the (blue) dashed line that runs above and below the average score* (before the meeting, the coach can trace over this dashed line with a blue marker, and refer to "the blue line" to reference particularly successful AP/IB students).

Facilitator Note:
Student responses to survey packet entered into a scoring program and compared against the responses of 2,300+ other AP/IB students from 20 FL high schools (mean score = 50, as reflected in the dashed line). **S**uccessful subgroup = top 10% of norm sample that met all indicators of emotional success (high life satisfaction, no mental health problems, low school burnout) and academic success (GPA > 3.0, passing scores on end-of-course AP/IB exams).

- Check for understanding and expectations.
  - *What questions do you have about the information in this graph?*
- Transition to a focus on the student's own scores (levels)
  - *Let's walk through a graph that has your scores along with these other two lines of scores, so you can see how your scores compare to other students.*

Part 3: Review individualized norm-referenced graph with student

- Before the meeting, use a highlighter or orange marker to trace over the student's score line, and refer to "the orange/highlighted line" to reference the student's scores.
- Orient student to their scores on the graph and allow them 1-2 minutes to review their graph and independently identify their personal strengths.
  - *This colored line shows your current level on each factor associated with student success, based on your responses to the 10-page packet you completed. I'd like to offer you a chance to silently look at the graph before we talk about it together.*
  - [OPTIONAL] *As you're reviewing your scores, some students find it helpful to circle their greatest strengths in green and any areas of concern we may want to discuss together in red. I'll give you a few minutes for you to review your graph independently and color on it if you'd like, let me know when you're done processing.*
    - To further reinforce the concept the coach can circle an example of a clear strength (point on graph within or close to green shaded section) in green and clear weakness (point on graph far from green shaded section) in red.

- Review 1-2 student's relative strengths in coping, engagement, and home support (factors in shaded area and/or above comparison line).
    - *Let's discuss some of your strengths, factors that are closer to the shaded green area.*
- Review 1-2 relative weaknesses and other areas for growth.
    - *Thanks for discussing your coping and engagement strengths with me! Let's turn our attention to areas that indicate room for growth.*

Part 4: Agenda mapping; Prioritize areas of change in a way that balances students' autonomy with assessment data

- Recognize relatively high scores noted.
    - *Thanks for spending that time getting to know you. We have talked about a lot of different things, like your strengths in* [reference targets near green]. *You have a lot of things going well!*
- Give student autonomy to identify what factors may be important to maintain/improve/decrease. Make it clear where you're heading for rest of conversation.
    - *You are very insightful, and understand* [list factors identified as having room for growth] *have room for growth. Let's take some time to discuss which issues seem MOST pressing or important to you at the moment.*
- Consider options student circled on the graph and make a list if needed. If student voices a target not discussed already then say:
    - *You saw X and Y on the graph, but Z stands out as the top priority for you.*
- Allow the student to prioritize and select area of focus.
    - *Let's prioritize. What do you think is the most important thing to work on first?*
- Provide a **transitional summary** to planning.
    - *I think that you've identified an area that we can work on together.*
    - Complete Step 1 of the Problem-Solving Process record form. Either the student can complete the form or the coach can complete in a discreet manner if the worksheet might distract from the conversation.
    - *I would like us to take some notes while we talk so we capture all the great ideas you have. Would you like to write, or do you prefer that I do?*
- Identify a concrete goal and/or replacement behavior, particularly if the student chose to focus on limiting an ineffective coping style. Record the goal in the top part of the Action Plan if desired. Example questions:
    - *How will you know when success in this area has occurred?*
    - *How much school do you want to attend?*
    - *How many uninterrupted hours of sleep do you want to get each night?*
    - *How much of your work do you want to complete independently?*
    - *How many extracurricular activities do you want to get involved in?*
    - *How many hours per week would you like to spend in extracurriculars?*

Part 5: Summarize and transition to planning

- **Summarize** factor identified as an area for change.
    - *Thanks for setting that admirable goal with me. You would like to work on* [target behavior] *because it is an area for growth. I'd like to help you plan how you will do this.*

AP MEETING STEP D: PLANNING

Time: Approximately 15-20 minutes

Purpose: This stage should culminate in a specific plan of action that targets the areas in need of improvement discussed earlier in the session. Students should (a) express commitment to change, and (b) leave with an action plan.

Part 1: Help the student brainstorm strategies for meeting goals in prioritized areas using Problem-Solving Process in Action form

- Prompt the student to generate alternate solutions for making positive changes with the first target (behavior to maintain or change) and write them down on Step 3 of the Problem-Solving Process form.
    - *What has helped in the past to address that behavior?*
    - *What have you seen work for your classmates or friends?*
    - *How much do you want me to offer some ideas, including some strategies we shared during the ACE Program that have worked for other students?* [Use ACE Program: Potential Strategies Cheat Sheet for ideas]
- Encourage student to select the best solution(s) (Step 4 of Problem-Solving Process in Action form).
    - *You came up with some great ideas! Among the solutions you generated, which one(s) would you like to try out?*

  Encourage students to celebrate successful outcomes when this solution works, and to pick a different solution if the outcome is not as positive as planned (Step 5)

Part 2: Create an action plan that specifies action steps, supports needed, and a timeline.

- Complete p.5 of the Student Success Planning Guide (Action Plan) by breaking down the action plan into small, doable steps.
    - *The target most important to you is* [reflect student's choice] *and your goal is* [reflect student's choice, while filling in the top column of the Action Plan].
    - *The solution(s) you choose to do are* [reflect student's choice].
- If a concrete goal or replacement behavior was not identified early in the meeting (e.g., end of Focus), set behavioral goal now prior to developing action steps.
    - *I wonder if setting a specific goal would help you to know what you're striving towards. How would your overall goal of* [insert goal] *play out in a typical week?*
    - *How will you know when success in that areas occurs?*
        - *What specific time and task management strategy would you like to focus on?*
        - *How much school do you want to attend?*
        - *How many uninterrupted hours of sleep do you want to get each night?*
        - *How much of your work do you want to complete independently?*
    - Preparing: *What would be a first step?*
    - Setting a date: *When could you do that?*
- Complete "Sticking to My Plan" portion of Action Plan by reframing challenges, finding ways for the student to hold themselves accountable, and discussing which supports are needed to accomplish plan.
    - *How can you stick to this plan?*

    - *Who can you share your progress with as you move through this action plan?*
- Complete "Anticipating Bumps in the Road" section of Action Plan
    - *What do you think might be some barriers that will keep you from reaching your goal?*
    - *Knowing that this barrier might get in the way, what are some possible solutions to overcome this obstacle?*
    - Use handout to record barriers and identify strategies for overcoming barriers.

Part 3: Increase commitment in change and end the meeting

- Ask student to sign the final page of the planning form if he or she is sufficiently confident to commit to enacting the change plan.
- Explain that you will drop off a letter to student in two weeks that summarizes the action plan developed in this first meeting.
- Schedule a second meeting with the coach.
    - *This last page is the 'commitment' page where we both make a commitment on the work we've done today. On your end you are committing to try your best to follow through on the action plan you created. You don't have to be perfect, but make an attempt to use the strategies you came up with to reach your goal of* [insert goal]. *On my end, I'm committing to 2 things: One I'm going to be the person rooting for you behind the scene, silently cheering for you from the sidelines. Two, I'm also going to meet with you again a month from now to check in on your action plan. We can celebrate any successes you've made and problem solve any barriers you've faced. In two weeks, I will also send you a reminder letter that summarizes your plan today. How does that sound?*
- Coach also signs, demonstrating collaboration.
- Arrange for a paper or electronic copy (e.g., taking photo of the plan with their phone) of the action plan to be provided to the student.

Appendix G: Meeting 1 Student Success Planning Guide

Student: _____ *USF Coach:* _____
School: _____ *Date:* _____

Extra Support Meetings: Student Success Planning Guide

MAP AGENDA

1. Get to know more about your personal values, strengths, and goals.
2. Review your survey results and how they compare to other AP/IB students.
3. Develop a plan to help you meet your goals.

ACTION PLANNING AGENDA

1. Review your survey results and how they compare to other AP/IB students.
2. Develop a plan to help you meet your goals.

How well am I doing in each area below, factors related to academic and emotional success?

Factor/Target	Compared to Other AP/IB Students		
COPING WITH SCHOOL-RELATED STRESS			
Using Problem-Focus Coping Styles?			
Time and Task Management	Lower	Same	Higher
Positive Thinking	Lower	Same	Higher
Turn to Family	Lower	Same	Higher
Seek Academic Support	Lower	Same	Higher
Relaxation	Lower	Same	Higher
Turn to Spirituality	Lower	Same	Higher
Limiting Use of Withdrawal and Rely on Self Coping Style?	Higher	Same	Lower
Limiting Use of Avoidance Coping Styles?			
Withdraw and Rely on Self	Higher	Same	Lower
Sleep More to Avoid Stressors	Higher	Same	Lower
Reduce Effort on Schoolwork	Higher	Same	Lower
Take Short Cuts at School	Higher	Same	Lower
Skip School	Higher	Same	Lower
Turn to Substances	Higher	Same	Lower
Experiencing Eustress at School (Feel Motivated by Demands)?	Lower	Same	Higher
STUDENT ENGAGEMENT			
Feel Connected to School and AP/IB Program?			
Positive Relations with AP/IB Teachers	Lower	Same	Higher
Satisfied with AP/IB Courses/Program	Lower	Same	Higher
Pride in School	Lower	Same	Higher
Involved in Extracurricular Activities?			
Take Part in Multiple Types of Extracurriculars	Lower	Same	Higher
Healthy # of Total Weekly Hours in All Extracurriculars	Lower	Same	Higher
Focused on Schoolwork and Interested in AP/IB Classes? (high personal standards; persist towards goals; strategies to reach goals)	Lower	Same	Higher
Motivated to Engage in AP/IB Coursework? (confident in academic abilities; feel in control & absorbed during class)	Lower	Same	Higher
HOME			
Parents Provide Emotional Support (warm, available)?	Lower	Same	Higher
Parents Encourage Age-Appropriate Independence?	Lower	Same	Higher

Values, Strengths, and Goals (MAP MEETING ONLY)

Areas of Importance
1.
2.
3.

Values	
1.	4.
2.	5.
3.	

Character Strengths from VIA classification:	
1.	4.
2.	5.
3.	

Goals for later high school or post-high school plans:
1.
2.
3.

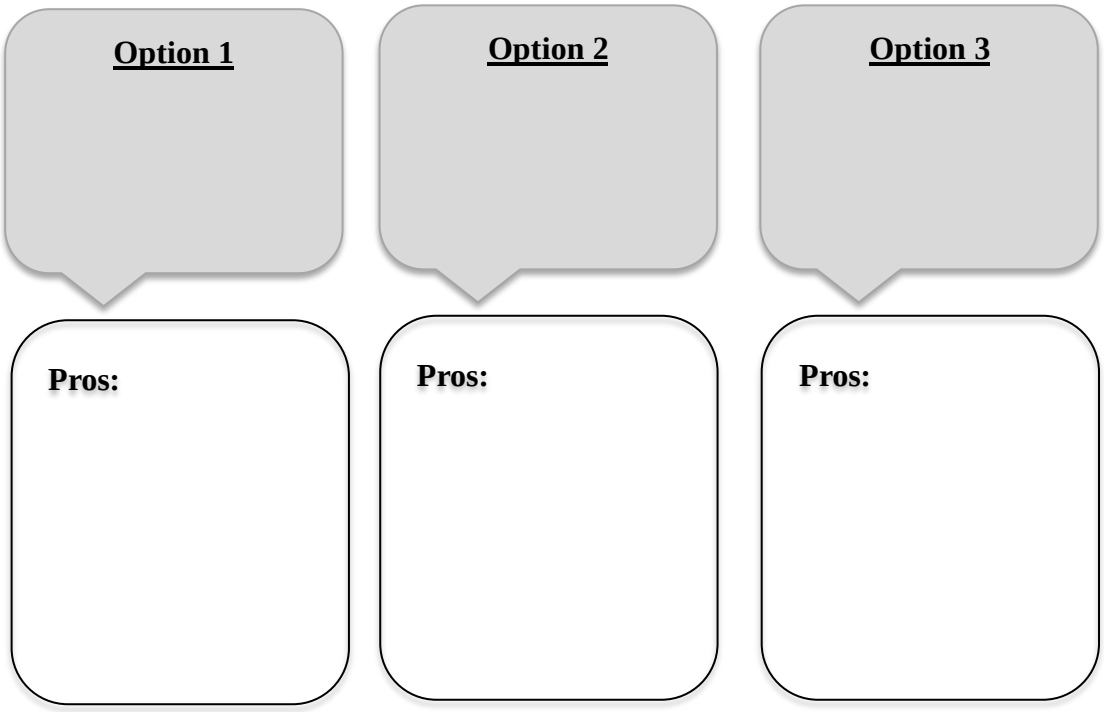
Notes:

Problem-Solving Process in Action

Step 1: Recognize Factors that can be Improved Upon

Step 2: Determine the Potential Benefits of Addressing those Factors (skip this step if this is Action Planning meeting)

Step 3: Develop Alternative Solutions and Evaluate Possible Benefits



Step 4: Select the Best Solution and Try It Out

Step 5: Evaluate the Outcome; Savor Successes

Action Plan

Target: I want to maintain/improve/decrease:

Goal:

Steps	Action Steps	By (Date)
1.		
2.		
3.		
Additional Steps		

Sticking to My Plan

How will I keep myself accountable to this plan?

With whom can I share my progress? How and when?

Anticipating Bumps in the Road

Potential Barriers	Solutions

I, _____, plan to carry out the planned steps and activities I worked on today with my ACE Program Coach, Kai Zhuang Shum.

I would receive a reminder copy of the action plan(s) I created today, in 2 week(s).

I would meet with the ACE Program Coach again, in 2 weeks.

_____ _____

Signature of Student Date

_____ _____

Signature of ACE Program Coach Date

Appendix H: Meeting 2 Student Success Planning Guide

Student: _____ *USF Coach:* _____
School: _____ *Date:* _____

Extra Support Meetings: Student Success Planning Guide

MAP AGENDA

1. Review goals made during Meeting 1 and discuss any changes made since the first meeting.
2. Discuss personal values, strengths, and long-term goals.
3. Review graph and decide how to focus this meeting:
    a. Update your previous goal and revise the plan
    b. Work on creating a new goal together
4. Develop an action plan to help you overcome barriers and meet your goals

ACTION PLANNING AGENDA

1. Review personal goal made during Meeting 1 and discuss any changes made since the first meeting.
2. Review graph and decide how to focus this meeting:
    a. Update your previous goal and revise the plan
    b. Work on creating a new goal together
3. Develop an action plan to help you overcome barriers and meet your goals

Values, Strengths, and Goals (MAP MEETING ONLY)

Areas of Importance
1.
2.
3.

Values	
1.	4.
2.	5.
3.	

Character Strengths from VIA classification:	
1.	4.
2.	5.
3.	

Goals for later high school or post-high school plans:
1.
2.
3.

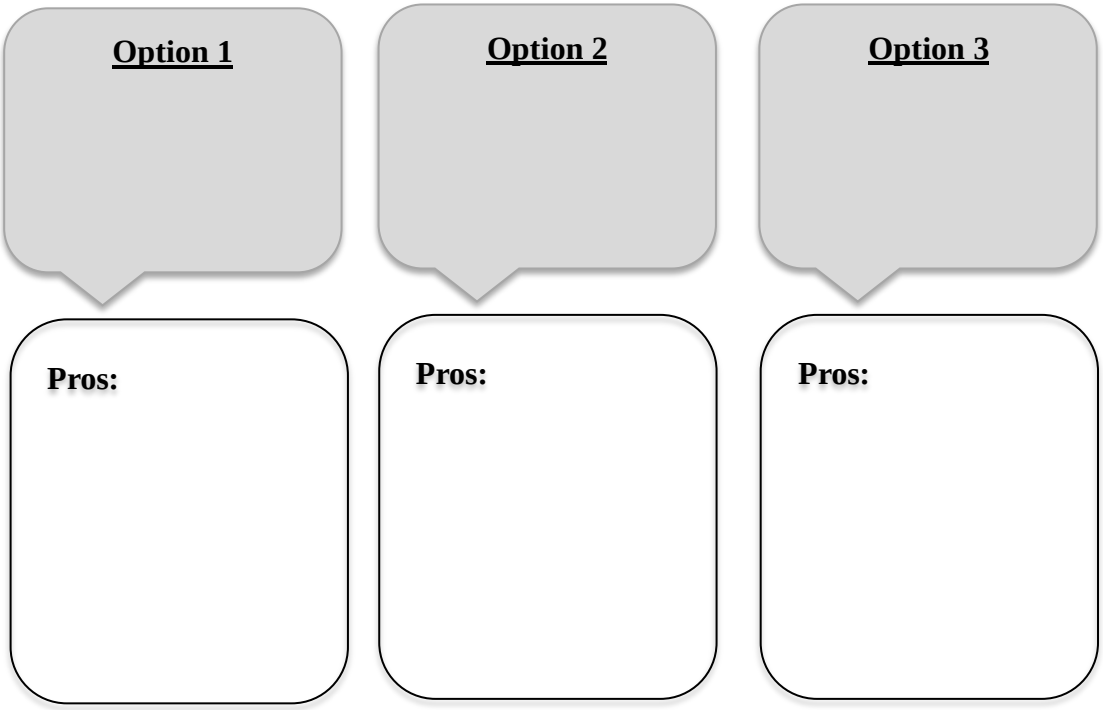
Notes:

Problem-Solving Process in Action

Step 1: Recognize Factors that can be Improved Upon

Step 2: Determine the Potential Benefits of Addressing those Factors (skip this step if this is Action Planning meeting)

Step 3: Develop Alternative Solutions and Evaluate Possible Benefits



Step 4: Select the Best Solution and Try It Out

Step 5: Evaluate the Outcome; Savor Successes

Action Plan

Target: I want to maintain/improve/decrease:

Goal:

Steps	Action Steps	By (Date)
1.		
2.		
3.		
Additional Steps		

Sticking to My Plan

How will I keep myself accountable to this plan?

With whom can I share my progress? How and when?

Anticipating Bumps in the Road

Potential Barriers	Solutions

I, _____, plan to carry out the planned steps and activities I worked on today with my ACE Program Coach, Kai Zhuang Shum.

I would receive a reminder copy of the action plan(s) I created today, in 2 week(s).

I would meet with the ACE Program Coach again, in 2 weeks.

_____ _____

Signature of Student Date

_____ _____

Signature of ACE Program Coach Date

Appendix I: MAP Meeting Fidelity Form

Fidelity Checklist – Motivation, Assessment, and Planning (MAP) Meeting

MAP Coach: KS **Student Initials**: _____ **Date**: __/19_____
School: _____RRHS_____ **Class Teacher/Period:** _____

Item No.	Key Elements in Session	Content Covered? Y/N		Comments
ENGAGE (10-15 minutes)				**Start time: __0:00_____ End time: _____**
1.	Introduction to coach.	Y	N	
2.	Share meeting agenda/objectives of MAP session. **FIDELITY CODING NOTE:* *PROCEED TO ITEM 9 IF THIS IS SESSION 1*	Y	N	
3.	Discuss target student chose to address (or goal developed) during Meeting 1.	Y	N	
4.	Discuss student's reasons for developing initial goal.	Y	N	
5.	Mention written reminder of change plan coach provided to student after Meeting 1.	Y	N	
6.	Discuss student's current progress on goal (e.g., ask what action steps they took since last meeting).	Y	N	
7.	Discuss links between academic and/or emotional status and change efforts.	Y	N	

8.	Summarize student's current situation (e.g., progress toward goal developed during Meeting 1, emotional or academic status, primary barriers in life).	Y	N	
9.	Discuss student's current situation (e.g., most important things to student right now).	Y	N	
10.	Discuss at least one of the student's value.	Y	N	
11.	Discuss at least one of the student's character strengths.	Y	N	
12.	Discuss the student's long-term goals.	Y	N	
13.	Link goals and/or values to performance in AP/IB classes.	Y	N	
14.	Link ACE Program targets (coping and/or school connectedness) to student's goals.	Y	N	
15.	Transition to focus by summarizing student's background (current situation, goals, values, and strengths).	Y	N	
16.	**MEETING 1 ONLY:** Elicit student knowledge of ACE module content.	Y	N	
FOCUS (20-25 minutes)				**Start time: _____ End time: _____**
17.	Elicit reactions to completion of survey packet. **FIDELITY CODING NOTE:* *Items 17-26 are optional during Meeting 2*	Y	N	
18.	Present base graph to student by explaining 4 core content areas (effective & ineffective coping, engagement, home).	Y	N	
19.	Explain two comparison lines on graph (sample mean and successful students).	Y	N	
20.	Transition to student's own scores (e.g., ask how seeing their data may be helpful, what they expect to see)	Y	N	
21.	Present individualized graph to student.	Y	N	
22.	Discuss at least one of the student's relative **strengths** on graph.	Y	N	
23.	Identify student's relative **weakness(es)** on graph	Y	N	
24.	Discuss discrepancy between student's relative weakness score and comparison group(s) or personal standards/goals	Y	N	
25.	Discuss how student's current behavior is affecting his/her performance in AP/IB classes.	Y	N	

	(OPTIONAL) Complete steps 18 and 19 again with another relative weakness.	Y	N	
26.	Prioritize an area(s) to focus on for remainder of meeting (e.g., What issues seem most pressing to you?)	Y	N	
27.	Transition to evoke by summarizing factor(s) identified as areas for change and reaffirm strengths.	Y	N	
EVOKE (5 minutes)				**Start time: _____ End time: _____**
28.	Ask <u>first</u> evocative question to solicit student's DARN for change. Circle question type used: • Desire *(why is [change] so important?)* • Ability *(how can your strengths help you improve?)* • Reasons (*3 best reasons for making a change?)* • Need (*what does future hold if you change*?)	Y	N	
29.	Ask <u>second</u> evocative question to solicit student's DARN for change. Circle question type used: • Desire *(why is [change] so important?)* • Ability *(how can your strengths help you improve?)* • Reasons (*3 best reasons for making a change?)* • Need (*what does future hold if you change*?)	Y	N	
30.	Gauge readiness to change with the importance ruler.	Y	N	
31.	Transition to planning by summarizing change talk.	Y	N	
PLANNING (15 minutes)				**Start time: _____ End time: _____**
32.	Generate alternate solutions.	Y	N	
33.	Elicit student's perception of advantages of each solution.	Y	N	
34.	Encourage student to pick the "best" option(s).	Y	N	
35.	Develop goal (replacement behavior) for the target identified for focus.	Y	N	
36.	List action steps and timeline to enact selected solution(s)	Y	N	
37.	Discuss supports that will help student to stick to plan.	Y	N	
38.	Discuss potential barriers to completion of action plan (e.g., use a confidence ruler to identify barriers).	Y	N	
39.	Build hope and confidence (e.g., review prior successes, re-affirm strengths, reframe prior attempts as important steps	Y	N	

	towards lasting change).			
40.	Ask student to sign the final page of planning form, along with coach signing	Y	N	
41.	**MEETING 1 ONLY:** Foreshadow second Meeting to student.	Y	N	
42.	Provide copy of the action plan to student.	Y	N	

Session Protocol Fidelity Score:

A. # of session elements completed (circled "Y"):	_____
B. # of session elements expected:	36 (Session 1) or 30 (Session 2)
% elements completed this session (Line A / 35 or 30):	_____%

Appendix J: AP Meeting Fidelity Form

Fidelity Checklist – Action Planning Meeting

MAP Coach: KS
School: __RRHS_____

Student Initials: _____ **Date**: __/19_____
Class Teacher/Period: _____

Item No.	Key Elements in Session	Content Covered? Y/N		Comments
ENGAGE (5-10 minutes)				**Start time: _0:00_____ End time: _____**
43.	Introduction to coach.	Y	N	
44.	Share meeting agenda/objectives of AP session. **FIDELITY CODING NOTE:* *PROCEED TO ITEM 7 IF THIS IS MEETING 1*	Y	N	
45.	Discuss target student chose to address (or goal developed) during Meeting 1.	Y	N	
46.	Mention written reminder of change plan coach provided to student after Meeting 1.	Y	N	
47.	Discuss student's current progress on goal (e.g., ask what action steps they took since last meeting).	Y	N	
48.	Summarize student's current situation.	Y	N	
FOCUS (10-15 minutes)				**Start time: _____ End time: _____**
49.	**MEETING 1 ONLY:** Elicit student knowledge of ACE module content.	Y	N	
50.	Present base graph to student by explaining 4 core content areas (effective & ineffective coping, engagement, home).	Y	N	

	**FIDELITY CODING NOTE:* *Items 8-14 are optional during Meeting 2*			
51.	Explain two comparison lines on graph (sample mean and successful students).	Y	N	
52.	Transition to student's own scores	Y	N	
53.	Present individualized graph to student.	Y	N	
54.	Discuss at least one of the student's relative **strengths** on graph.	Y	N	
55.	Discuss student's relative **weakness(es)** on graph	Y	N	
56.	Prioritize an area(s) to focus on for remainder of meeting (e.g., What issues seem most pressing to you?)	Y	N	
57.	Transition to planning by summarizing factor(s) identified as areas for change.	Y	N	
PLANNING (15 minutes)				**Start time: _____ End time: _____**
58.	Generate alternate solutions.	Y	N	
59.	Elicit student's perception of advantages of each solution.	Y	N	
60.	Encourage student to pick the "best" option(s).	Y	N	
61.	Develop goal (replacement behavior) for the target identified for focus.	Y	N	
62.	List action steps and timeline to enact selected solution(s)	Y	N	
63.	Discuss supports that will help student to stick to plan.	Y	N	
64.	Discuss potential barriers to completion of action plan.	Y	N	
65.	Ask student to sign the final page of planning form, along with coach signing	Y	N	
66.	**MEETING 1 ONLY:** Foreshadow second Meeting to student.	Y	N	
67.	Provide copy of the action plan to student.	Y	N	

Session Protocol Fidelity Score:

A. # of session elements completed (circled "Y"):	_____
B. # of session elements expected:	21(Session 1) or 16 (Session 2)
% elements completed this session (Line A / 21 or 16):	_____%

Appendix K: Outcome and Acceptability Assessment

Extra Supports Meeting- Student Feedback Form

PART I Directions: Based on the meeting you had with a coach from the USF ACE Team, please rate your level of agreement or disagreement with the following statements.

Item	**Strongly Disagree**	**Disagree**	**Neither Agree nor Disagree**	**Agree**	**Strongly Agree**
1. I feel the target behavior my coach and I discussed today is important.	SD	D	N	A	SA
2. The target behavior my coach and I discussed today became more important as the meeting went along.	SD	D	N	A	SA
3. I am ready to make change in the target behavior discussed during today's meeting.	SD	D	N	A	SA
4. Because of this meeting, I feel confident that I will meet my goal.	SD	D	N	A	SA
5. I know I can take the steps necessary to reach my goal.	SD	D	N	A	SA
6. I am confident that my plan will help me overcome barriers to reach my goal.	SD	D	N	A	SA
7. I would recommend the meeting to other students.	SD	D	N	A	SA
8. I felt comfortable during this meeting.	SD	D	N	A	SA
9. The materials presented were helpful.	SD	D	N	A	SA
10. The process used to develop the action plan was helpful.	SD	D	N	A	SA
My Relationship with the USF Coach *Please select one answer for each question.*	**Not at All**	**Only A Little**	**Some-what**	**Quite a Bit**	**Totally**
11. Did this meeting head in the direction that you wanted?	1	2	3	4	5
12. Did you understand the things that your coach said in this meeting?	1	2	3	4	5
13. Did you and your coach work on problems together in this meeting?	1	2	3	4	5
14. In this meeting, did you feel that your coach would stick with you no matter how you behaved?	1	2	3	4	5
15. In this meeting, did you feel that your coach understood what it feels like to be you?	1	2	3	4	5

--------- PLEASE FLIP TO PAGE 2 FOR ADDITIONAL QUESTIONS ---------

PART II Directions: Please take about 3 minutes to record your thoughts. There are no right or wrong answers. Write down the first thought that comes to your head.

A. What part of the meeting did you find most interesting or useful?

_____

_____

_____

B. AFTER MEETING 1 ONLY: What are the good and bad parts of the meeting?

_____

_____

_____

C. AFTER MEETING 2 ONLY: Can you name some differences between the extra support you experienced today compared to our last meeting?

_____

_____

_____

D. Additional comments and suggestions.

_____

_____

_____

Appendix L: Parent Consent Form

Study ID:Ame19_Pro00022787 Date Approved: 1/17/2019

Dear Parent or Guardian:

This letter provides information about a study being done at your child's school by researchers from the University of South Florida (USF). Your child is in an Advanced Placement (AP) class that is participating in the Advancing Coping and Engagement (ACE) program this year. Through ACE, all students in the AP class learned ways to cope with academic stress and engage at school. The next step in ACE is to provide extra supports to students whose mid-year screening data indicates signs of challenges with managing academic demands. The extra supports involve two one-on-one meetings with a coach from USF. The purpose of this study is to evaluate two types of individualized, extra supports. In one type of support—Action Planning—students will work with a coach to develop an action plan to improve coping or engagement. In the other type of support—Motivation, Assessment, and Planning (MAP) — students will work with a coach to explore personal values, goals, and strengths before developing an action plan.

- ✓ Who We Are: This study is led by Dr. Shannon Suldo, in collaboration with other faculty as well as graduate students (including Kai Zhuang Shum) in the USF College of Education.
- ✓ Why We are Requesting Your Child's Participation: This study is part of a federally-funded project: "Supporting High School Students in College-Level Classes." Your child is being asked to participate because he or she is in an AP class that is participating in the ACE program this year. We are doing this study to improve and evaluate class wide and extra supports for students in AP and IB classes.
- ✓ Why Your Child Should Participate: The extra support is intended to help students develop coping strategies and school engagement linked to emotional and academic success in AP and IB. Therefore, your child may benefit directly from getting the extra support. We are evaluating the usefulness of two different types of extra support provided to students who may have challenges managing their academic demands. Students who take part in this study will receive both types of extra support—Action Planning and MAP—in one-on-one meetings with a member of the ACE research team referred to as a coach. This study will compare the usefulness of each type of support. The information that we collect from students will be used to improve our extra support materials. This will help make sure the program works well for future AP and IB students. Neither you nor your child will be paid for your child's participation in the study. However, all students who participate by providing feedback to coaching meetings will receive a $10 gift card on each occasion.
- ✓ What Participation Requires: Extra supports offered to participating students include two meetings with an ACE coach. These meetings are about 30-45 minutes long. Meetings will be during school hours, at a time that best fits your child's schedule. In the Action Planning meeting, students will review their current levels of coping and engagement, select a target for improvement, and spend the bulk of the meeting creating an action plan. In the MAP meeting, students describe their personal values, strengths, and goals. Students connect their personal goals to the topics discussed in the ACE program—coping and engagement. Students select an area for improvement, and work with the ACE coach to create an action plan. This study aims to investigate the usefulness of each type of support (Action Planning vs. MAP). Students who take part in the extra supports will be randomly assigned to receive either Action Planning or MAP in the first meeting, and the other type of support in the second meeting. Your child will be asked to (1) share their perspectives on the usefulness of each meeting, (2) report readiness to change the target discussed during the meeting, and (3) at the beginning of the next meeting, report the progress they made on the last action plan developed. It will take about 10 minutes to provide this self-report information at the end of each meeting, and during a brief check in about one month after the second meeting. In total, participation in the extra supports, and completion of the feedback forms and progress reports, will take no more than approximately 2 hours during the 2018-19 school year.
- ✓ Confidentiality of Your Child's Responses: This research is considered to be minimal risk. That means that the risks associated with this study are the same as what your child faces every day. There are no known additional risks to those who take part in this study. During all meetings, ACE coaches will respect the privacy of your family and no information that identifies your child will be retained or used after this study concludes. Your child's privacy and research records, including any information discussed in the extra support meetings, will not be shared with school staff, and will be kept confidential to the extent of the law.

Authorized research personnel, employees of the Department of Health and Human Services, the USF Institutional Review Board and its staff, and other individuals acting on behalf of USF may inspect the records from this research project; but, your child's specific responses will not be shared with anyone other than the research team. Although this information is not explicitly discussed, any evidence of child abuse or neglect disclosed during an extra support meeting must be reported to authorities. Also, if your child says that he or she plans to harm someone or him or herself, or that he or she is in extreme emotional distress, research staff (ACE coaches) must tell people at the school to help your child. Your child's responses during the coaching and feedback meetings will be digitally audio recorded, and then assigned a code number to protect the confidentiality of his or her statements. Consenting for your child to participate in this project also indicates your consent for your child to be audio recorded. Only we will have access to the locked file cabinet stored at USF that will contain all records linking code numbers to participants' names.

- ✓ Please Note: Your decision to allow your child to participate in this research study is voluntary. Refusal to participate in the research will involve no academic penalty or loss of benefits to which your child is otherwise entitled. You are free to withdraw your child from this research study at any time. Any decision to participate, not to participate, or to withdraw participation at any point during the study will in no way affect your child's student status, his or her grades, or relationship with his or her high school, school district, USF, or any other party.
- ✓ What We'll Do With Your Child's Responses: We plan to use findings from this study to compare the usefulness of the two extra supports (MAP vs. Action Planning) and further refine the intervention materials. Results from data collected during this study may be published. However, the data from your child will be combined with data from other people. The published results will not include your child's name or any other information that would in any way personally identify your child. All records from the study will be destroyed in five years.
- ✓ Questions? I If you have any questions about this research study, please contact us at (813) 466-0510 (Kai Zhuang Shum) or (813) 974-2223 (Dr. Suldo). If you have questions about your child's rights as a person who is taking part in a research study, you may contact a member of The Office of Research Integrity and Compliance at the University of South Florida at 813-974-5638, and refer to eIRB # 22787.
- ✓ Want Your Child to Participate? To permit your child to participate in this study, complete the consent form below (titled "Consent for Child to Take Part in this Research Study"). Please keep the other copy of this letter for your records.

Sincerely,

Shannon Suldo, Ph.D.	Kai Zhuang Shum, M.A.
Professor of School Psychology	Doctoral Candidate

Consent for Child to Take Part in this Research Study

I freely give my permission to let my child take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

_____	_____	_____
Signature of adult	Printed name of adult	Date

***(Portion for USF to Complete):* Statement of Person Obtaining Informed Consent**

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

_____	_____	_____
Signature of person obtaining consent	Printed name of person obtaining consent	Date

Appendix M: Student Assent Form

Study ID:Ame19_Pro00022787 Date Approved: 1/17/2019

Dear Student:

This letter provides information about a study being done at your school by researchers from the University of South Florida (USF). Congratulations on completing the ACE program lessons in AP Human Geography! The USF ACE program is now offering several students in your class extra support to keep developing effective coping strategies and strong connections. The extra supports involve two one-on-one meetings with a coach from USF. During the meetings, you will experience two types of extra support. The purpose of this study is to evaluate the two types of individualized, extra supports. In one type of support—Action Planning—you will work with a coach to develop an action plan to improve coping or engagement. In the other type of support—Motivation, Assessment, and Planning (MAP) — you will work with a coach to explore personal values, goals, and strengths before developing an action plan.

- ✓ Who We Are: This study is led by Dr. Shannon Suldo, in collaboration with other faculty as well as graduate students (including Kai Zhuang Shum) in the USF College of Education.
- ✓ Why We are Requesting Your Participation: This study is part of a federally-funded project: "Supporting High School Students in College-Level Classes." You are being asked to participate because you are in an AP class that is participating in the ACE program this year. We are doing this study to improve and evaluate class wide and extra supports for students in AP and IB classes.
- ✓ Why You Should Participate: The extra support is intended to help students develop ways to cope with stress and connect to school. Past research has shown that coping and connections link to success in AP and IB classes. Therefore, you may benefit directly from getting the extra support. We are evaluating the usefulness of two different types of extra support provided to students who may have challenges managing their academic demands. Students who take part in this study will receive both types of extra support—Action Planning and MAP—in one-on-one meetings with a member of the ACE research team referred to as a coach. This study will compare the usefulness of each type of support. The information that we collect from students will be used to improve our extra support materials. This will help make sure the program works well for future AP and IB students. You will not be paid for your participation in the study. However, all students who participate by providing feedback to coaching meetings will receive a $10 gift card on each occasion.
- ✓ What Participation Requires: This extra support involves two one-on-one meetings with an ACE coach. ACE coaches are from the USF research team, and do not work for your schools. Meetings last about 30 to 45 minutes. We schedule meetings at a time that fits best with your schedule. In the Action Planning meeting, you will review your current levels of coping and engagement, select a target for improvement, and spend the bulk of the meeting creating an action plan. In the MAP meeting, you will describe your personal values, strengths, and goals. Then, you will connect your personal goals to the topics discussed in the ACE program—coping and engagement. Finally, you select an area for improvement, and work with the ACE coach to create an action plan. This study aims to investigate the usefulness of each type of support (Action Planning vs. MAP). If you decide to take part in the extra supports, you will be randomly assigned to receive either Action Planning or MAP in the first meeting, and the other type of support in the second meeting. Your will also be asked to (1) share your perspectives on the usefulness of each meeting, (2) report readiness to change the target discussed during the meeting, and (3) at the beginning of the next meeting, report the progress you made on the last action plan developed. It will take about 10 minutes to provide this self-report information at the end of each meeting, and during a brief check in about one month after the second meeting. In total, participation in the extra supports, completion of the feedback forms and progress reports, will take no more than approximately 2 hours during the 2018-19 school year.
- ✓ Confidentiality of Your Responses: This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study. During all meetings, ACE coaches will respect your privacy. No information that identifies you will be kept or used after this study concludes. Information discussed in the extra support meetings will not be shared with school staff and will be kept confidential to the extent of the

law. Authorized research personnel, employees of the Department of Health and Human Services, the USF Institutional Review Board and its staff, and other individuals acting on behalf of USF may inspect the records from this research project; but, your specific responses will not be shared with anyone other than the research team. Although this information is not explicitly discussed, any evidence of child abuse or neglect disclosed during an extra support meeting must be reported to authorities. Also, if you say that you plan to harm someone or yourself, research staff (ACE coaches) must tell people at the school to help you. Your responses during the coaching and feedback meetings will be digitally audio recorded, and then assigned a code number to protect the confidentiality your statements. Assenting to participate in this study also indicates your assent to be audio recorded. Only we will have access to the locked file cabinet stored at USF that will contain all records linking code numbers to participants' names. Results from data collected during this study may be published. However, your data will be combined with data from other people. The published results will not include your name or any other information that would in any way personally identify you. All records from the study will be destroyed in five years.

- ✓ Please Note: Your decision to assent (agree) to take part in the extra support meetings, is voluntary. If you refuse to take part, you will not get in trouble or lose access to the supports that are always available in your class or at your school. You are free to stop taking part in this study at any time. Deciding to participate, not to participate, or to stop participating at any point during the study, will in no way affect your student status, grades, or your relationship with your high school, school district, USF, or anyone else.
- ✓ What We'll Do With Your Responses: We plan to use findings from this study to compare the usefulness of the two extra supports (MAP vs. Action Planning) and further refine the intervention materials. Results from data collected during this study may be published. However, your data will be combined with data from other people. The published results will not include your name or any other information that would in any way personally identify you. All records from the study will be destroyed in five years.
- ✓ Questions? I If you have any questions about this research study, please contact us at (813) 466-0510 (Kai Zhuang Shum) or (813) 974-2223 (Dr. Suldo). If you have questions about your rights as a person who is taking part in a research study, you may contact a member of The Office of Research Integrity and Compliance at the University of South Florida at 813-974-5638, and refer to eIRB # 22787.
- ✓ To participate in this study, complete the assent form below (titled "Assent to Take Part in this Research Study"). Please keep the other copy of this letter for your records.

Sincerely,

Shannon Suldo, Ph.D.	Kai Zhuang Shum, M.A.
Professor of School Psychology	Doctoral Candidate

Assent to Take Part in this Research Study

I freely give my permission to take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

_____	_____	_____
Signature of child	Printed name of child	Date

***(Portion for USF to Complete):* Statement of Person Obtaining Informed Consent**

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

_____	_____	_____
Signature of person obtaining consent	Printed name of person obtaining consent	Date

Appendix N: Student Recruitment Script

Recruiting Students for Study Participation

What USF research staff will say to students:

Congratulations on completing the Advancing Coping and Engagement (ACE) program lessons in Advanced Placement (AP) Human Geography! The USF ACE program is now offering several students in your class individualized extra supports. This help is intended to help you keep developing effective coping strategies and strong connections to school. The extra supports involve two one-on-one meetings with a coach from USF. During the meetings, you will experience two types of extra support. Researchers from USF are conducting a study to evaluate these two types of extra supports for AP/IB students. In the Action Planning meeting, you will review your current levels of coping and engagement, select a target for improvement, and spend the bulk of the meeting creating an action plan. In the MAP meeting, you will describe your personal values, strengths, and goals. Then, you will connect your personal goals to the topics discussed in the ACE program—coping and engagement. Finally, you select an area for improvement, and work with the ACE coach to create an action plan. The information that we collect from this study will be used to improve our extra support materials. This will help make sure the program works well for future AP and IB students. You are being asked to participate because you are in an AP class that is participating in the ACE program this year. Participation in this study is completely voluntary; it is your choice whether or not you want to participate. If you refuse to take part, you will not get in trouble or lose access to the supports that are always available in your class or at your school. You are free to stop taking part in this study at any time. Deciding to participate, not to participate, or to stop participating at any point during the study, will in no way affect your student status, grades, or your relationship with your high school, school district, USF, or anyone else. Students who decide to take part will be asked to participate in two meetings that last about 30 to 45 minutes. Students who decide to take part in the extra supports will be randomly assigned to receive either Action Planning or MAP in the first meeting, and the other type of support in the second meeting. Students will also be asked to (1) share their perspectives on the usefulness of each meeting, (2) report readiness to change the target discussed during the meeting, and (3) at the beginning of the next meeting, report the progress they made on the last action plan developed. It will take about 10 minutes to provide this self-report information at the end of each meeting, and during a brief check in about one month after the second meeting. In total, participation in the extra supports, completion of the feedback forms and progress reports, will take no more than approximately 2 hours during the 2018-19 school year. Students who participate by providing feedback to coaching meetings will receive a $10 gift card on each occasion.

Please keep one copy of the consent form for your personal records. Complete the other copy and return to me or your teacher as soon as possible. This study's procedures have been approved by USF (IRB # 22787. Thank you!

Kai Zhuang Shum, M.A.
School Psychology Program
813-466-0510 or kshum@mail.usf.edu

Shannon Suldo, Ph.D.
School Psychology Program
813-974-2223 or suldo@usf.edu

Appendix O: Interventionist Therapeutic Alliance Rating Form

Student Initials: _____ Date: _____

MAP/Action Planning Therapeutic Alliance Meeting 1 (Interventionist Version)

THERAPEUTIC ALLIANCE RATING (Directions: *All questions below refer to the meeting that you just completed with this student. Please select one answer for each question).*					
1. In this meeting, how would you describe your relationship with this student?	Very Poor	Poor	Satis-factory	Good	Excel-lent
2. In this meeting, how do you think the student will rate your relationship with him/her?	Very Poor	Poor	Satis-factory	Good	Excel-lent
GLOBAL APPRAISALS					
3. The student seemed engaged during this meeting.	SD	D	N	A	SA
4. The student and I had a positive working alliance during this meeting.	SD	D	N	A	SA
5. The student seems likely to make a positive change in a target discussed during today's meeting.	SD	D	N	A	SA
6. I feel the student benefitted from taking part in the meeting.	SD	D	N	A	SA

Date:_____

MAP/Action Planning Therapeutic Alliance Meeting 1 (Interventionist Version)

THERAPEUTIC ALLIANCE RATING (Directions: *All questions below refer to the meeting that you just completed with this student. Please select one answer for each question).*					
1. In this meeting, how would you describe your relationship with this student?	Very Poor	Poor	Satis-factory	Good	Excel-lent
2. In this meeting, how do you think the student will rate your relationship with him/her?	Very Poor	Poor	Satis-factory	Good	Excel-lent
GLOBAL APPRAISALS					
3. The student seemed engaged during this meeting.	SD	D	N	A	SA
4. The student and I had a positive working alliance during this meeting.	SD	D	N	A	SA
5. The student seems likely to make a positive change in a target discussed during today's meeting.	SD	D	N	A	SA
6. I feel the student benefitted from taking part in the meeting.	SD	D	N	A	SA
7. The student made progress on the initial goal from the 1st meeting.	SD	D	N	A	SA

Appendix P: Global Dimension Response Options for Motivational Interviewing Treatment Integrity (MITI)

Cultivate

1 No explicit attention to, or preference for, the client's language in favor of changing.
2 Sporadically attends to client language in favor of change – frequently misses opportunities to encourage change talk
3 Often attends to the client's language in favor of change but misses some opportunities to encourage change talk.
4 Consistently attends to the client's language about change and makes efforts to encourage it.
5 Shows a marked and consistent effort to increase the depth, strength, or momentum of the client's language in favor of change.

Soften

1 Consistently responds to the client's language in a manner that facilitates the frequency or depth of arguments in favor of the status quo.
2 Usually chooses to explore, focus on, or respond to the client's language in favor of the status quo.
3 Gives preference to the client's language in favor of the status quo but may show some instances of shifting the focus away from sustain talk.
4 Typically avoids an emphasis on client language favoring the status quo.
5 Shows a marked and consistent effort to decrease the depth, strength, or momentum of the client's language in favor of status quo.

Partnership

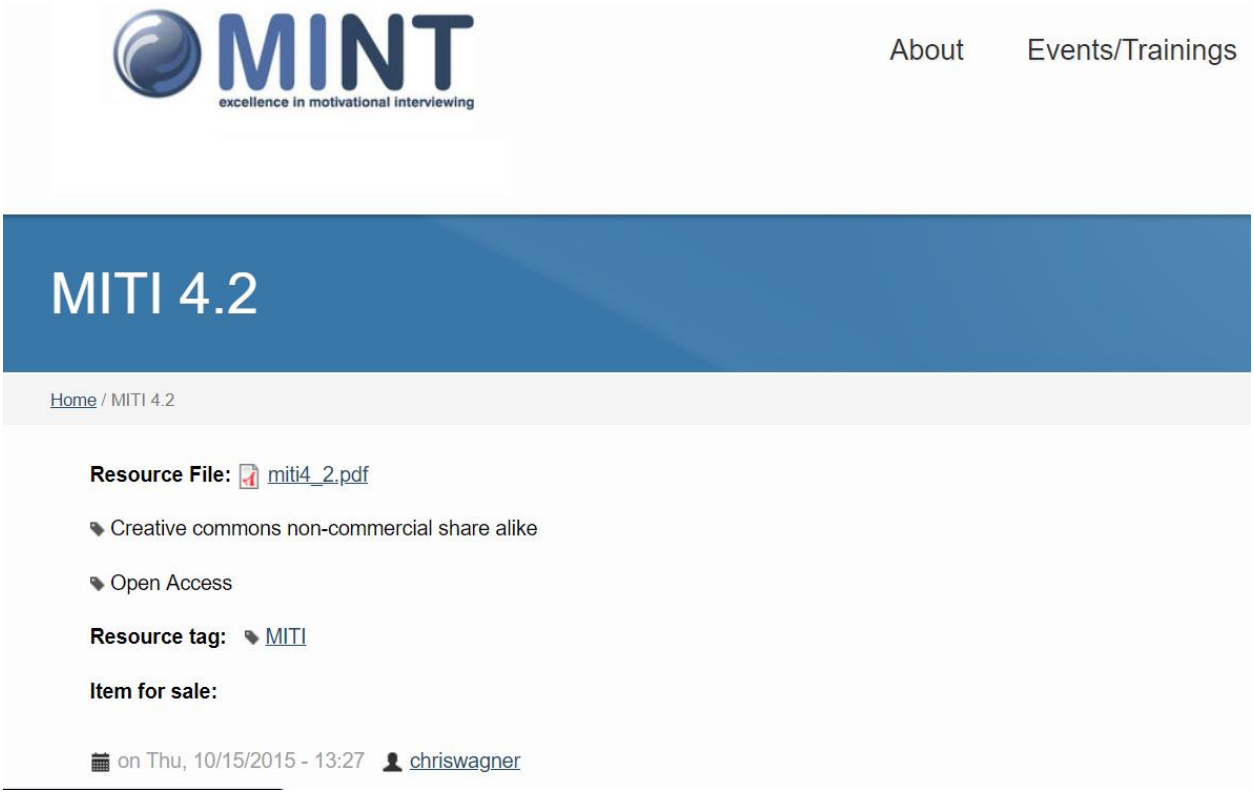
1 Actively assumes the expert role for the majority of the interaction with the client. Collaboration or partnership is absent.
2 Superficially responds to opportunities to collaborate.
3 Incorporates client's contributions but does so in a lukewarm or erratic fashion.
4 Fosters collaboration and power sharing so that the client's distributions impact the session in ways that they otherwise would not.
5 Actively fosters and encourages power sharing in the interaction in such a way that client's contribution substantially influences the nature of the session.

Empathy

1 Gives little or no attention to the client's perspective.
2 Makes sporadic efforts to explore the client's perspective. Clinician's understanding may be inaccurate or may detract from the client's true meaning.
3 Actively trying to understand the client's perspective, with modest success.
4 Makes active and repeated efforts to understand the client's point of view. Shows evidence of accurate understanding of the client's worldview, although mostly limited to explicit content.
5 Shows evidence of deep understanding of client's point of view, not just for what has been explicitly stated but what the client means but has not yet said.

Adapted from Moyers, T.B., Manuel, J.K., & Ernst, D. (2014). *Motivational Interviewing Integrity Coding Manual 4.2*. Unpublished manual.

Appendix Q: Permission to use MITI Coding Manual 4.2



Appendix R: Permission to use TAQS included in Peabody Treatment Progress Battery

Peabody Treatment Progress Battery 2010

PTPB 2010

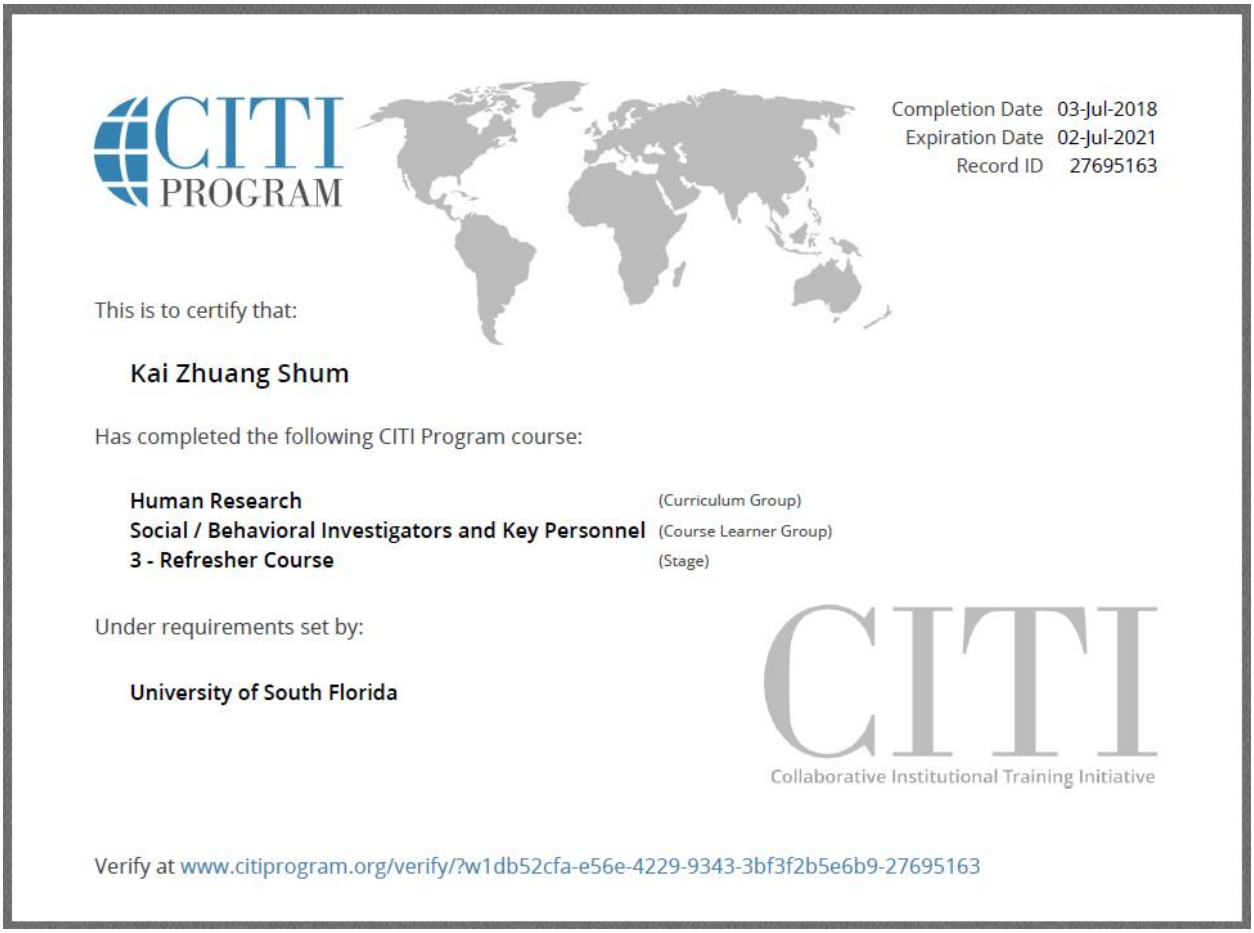
Registration Form and License Agreement

License Agreement and Registration Form

Available online at: http://peabody.vanderbilt.edu/ptpb

The PTPB 2010 Manual includes the full PTPB 2010 battery and is available at no charge for the paper-pencil versions. A completed **Registration Form** and consent to the **License Agreement** is required. Upon receipt of your information, we will send you an email containing the URL for the most current version of the ***Manual of the Peabody Treatment Progress Battery 2010***.

Appendix S: Social/Behavioral Investigators and Key Personnel Refresher Course



CITI PROGRAM

Completion Date 03-Jul-2018
Expiration Date 02-Jul-2021
Record ID 27695163

This is to certify that:

Kai Zhuang Shum

Has completed the following CITI Program course:

Human Research (Curriculum Group)
Social / Behavioral Investigators and Key Personnel (Course Learner Group)
3 - Refresher Course (Stage)

Under requirements set by:

University of South Florida

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w1db52cfa-e56e-4229-9343-3bf3f2b5e6b9-27695163

Appendix T: IRB Amendment Approval

USF
UNIVERSITY OF SOUTH FLORIDA

RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 • Tampa, FL 33612-4799
(813) 974-5638 • FAX(813)974-7091

1/18/2019

Shannon Suldo, Ph.D.
Educational and Psychological Studies
4202 East Fowler Ave., EDU 105
Tampa, FL 33620

RE: **Expedited Approval of Amendment**
IRB#: Ame19_Pro00022787
Title: Facilitating Academic Success and Emotional Well-Being Among High School Students in Accelerated Curricula

Dear Dr. Suldo:

On 1/17/2019, the Institutional Review Board (IRB) reviewed and **APPROVED** your Amendment. The submitted request and all documents contained within have been approved, including those outlined below, as described by the study team.

In an earlier stage of this project, in line with stated research objectives, they examined school mental health providers perceptions of the acceptability and utility of the selective intervention (Motivation, Assessment, and Planning [MAP] meetings) developed for use with students who had signs of academic and emotional challenges. In analyzing their reports, they learned that school mental health providers viewed the action planning stage (stage 4) of the 4-stage individualized intervention as the most useful component of MAP. In an effort to streamline MAP in a way consistent with school mental health providers feedback, they have developed a shorter action planning intervention that they seek permission to evaluate in relation to the full MAP. The purpose of this amendment is to describe the procedures to pilot and evaluate the action planning intervention, upload the intervention protocol that guides the action planning sessions as well as the related measures (student acceptability form, fidelity to action planning form, OTHERS), and submit for approval the recruitment script and consent form for use with youth/student participants.

Approved Item(s):
Protocol Document(s):
Narrative Protocol_Version 8_No track changes.docx

Consent Document(s)*:

Parent Consent_MAP vs Action Planning_1_9_19.docx.pdf
Student Assent_MAP vs Action Planning_1_9_19.docx.pdf

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab on the main study's workspace. Please note, these consent/assent document(s) are valid until they are amended and approved.

The IRB does not require that subjects be reconsented.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with USF HRPP policies and procedures and as approved by the USF IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) business days.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

Melissa Sloan, PhD, Vice Chairperson
USF Institutional Review Board