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An Examination of a Self-Determination Strategy on Academic Engagement for Students with Emotional Support Needs At Risk of Dropout

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CHAPTER 1: INTRODUCTION

Introduction to Study and Research Questions

High school dropout has been a significant concern of educators for some time. There are several reasons for such interest in school completion. Students who do not complete school are typically relegated to low skill, low income jobs providing students who do not graduate with poor paying jobs and substantially limited income for future employment (Christle, Jolivette, & Nelson, 2007; Rouse, 2005). Three additional reasons for concern regarding school completion include national economic competitiveness; opportunity for social mobility; and cost to society in lost income, tax revenue, and limited economic opportunity for those who do not complete high school (Christle et al.,, 2007; Darling-Hammonds, 2010; Rouse, 2005). The United States, in particular, has undergone a shift from a manufacturing economy to a service-based economy over the last few decades (Darling-Hammonds, 2010). Such a shift necessitates and educated populace to maintain the economic strength of a given nation (Darling-Hammonds, 2010).

While the percentage of students who dropout from school has decreased over the last 30 years from 14.1% in 1980 to 8.1% in 2009, the number of students who dropout of high school each year is close to 500,000 (National Center for Statistics, 2011). There are considerable financial and personal costs to both the individual and to society for the approximately 500,000 adolescents and young adults who dropout of school every year. For example, adults who have dropped out of school are less likely to be employed, earn substantially less money than adults with a high school diploma, and rely on social programs such as welfare to

live (Christle et al., 2007; Murray & Naranjo, 2008; Rouse, 2005). Additionally, approximately one-half of the prison population is comprised of high school dropouts (U.S. Department of Justice, 2003).

As a result of such dismal educational outcomes, student dropout has sparked considerable interest by researchers. Much of that research has been correlational research with a particular focus on demographics and not on experimental designs related to interventions (Lee & Burkham, 2003).

Research on demographic variables related to dropout rates has yielded important information. For example, several studies have indicated that socioeconomic status is one of the strongest predictors of dropout (Alexander, Entwisle, &Horsey, 1997; Goldschmidt & Wang, 1999; Stearns, Moller, Blau, & Potochnick, 2007). Additionally, race is a factor to be considered. For example, students of African-American or Hispanic ethnicity drop out at considerably higher rates than their Caucasian or Asian counterparts (National Center for Education Statistics, 2011). Male students are more likely than female students to dropout (Alexander et al., 1997). Finally, students with high incidence disabilities such as learning disabilities and emotional and behavioral disabilities have a much higher rate of dropout than peers without disabilities or peers with lower incidence disabilities such as autism or intellectual disabilities. Approximately 43% of students with emotional and behavioral disorders and 38% of students with learning disabilities leave school prior to completion (National Center for Education and Statistics, 2008). More striking, Kortering and Braziel (2009) found that

approximately 800 students with disabilities leave school without graduating every day.

While such research is powerful and helpful to educators in determining who might be at risk of dropout, the focus of the research has been solely on the student and not the environment in which the student is educated (Lehr, Hansen, Sinclair, & Christenson, 2003). More recently, research has shifted the focus from *who* drops out of school to identifying variables *within* the educational and home environment that contribute to student dropout (Landis & Reschly, 2011; Reschly & Christenson, 2006). For example, one variable that may be the most important to lack of school completion is attendance (Kemp, 2006). Poor attendance leads to missing instructional time, which can lead to poor grades, and the opportunity to build trusting relationships with adults (Battin-Pearson, 2000; Brown, 2007). Additional school-related variables that contribute to student dropout include poor academic achievement and/or grade retention, academic engagement, and social engagement (Bowman, 2005; Barry & Reschly, 2012; Finn & Zimmer, 2012).

Both poor academic achievement and poor attendance can lead to students disengaging from their education over time (Alexander et al., 1997; Brown, 2007). Consequently, students who are not achieving sufficiently or attending school regularly have to navigate a complex bureaucratic school system in order to stay on track for graduation and often get overwhelmed (Neild, 2009). Additionally, such negative school experiences can have a negative impact on student's identity and self-concept (Orr & Goodman, 2010).

Such pervasive and chronic negative school experiences can lead to a loss of intrinsic motivation, perceive a loss of control over one's life and a sense of helplessness (Legault, et al., 2003). Hardre and Reeve (2003) found that students who considered themselves self-determined and competent were more engaged in and motivated with school than peers who did not endorse themselves as self-determined and competent.

As a result, the following study seeks to examine the outcome of teaching a self-determination strategy to students with emotional and behavioral disabilities who are receiving instruction in a self-contained emotional support classroom. The reason these students were identified is that students with emotional and behavioral disabilities have the highest likelihood of dropout across all demographic categories making them a high priority for intervention (National Center for Education Statistics, 2008). Second, students receiving instruction in self-contained classrooms have most likely experienced some type of failure within the general education setting and/ or demonstrated poor attendance or they would continue to receive education in the general education setting.

Rationale and Significance of Study

This study is important for several reasons. One reason is that students with high incidence disabilities such as specific learning disabilities (38%) and emotional and behavioral disorders (43%) have the highest dropout rates in the United States of any demographic category (National Center for Statistics, 2008). Nationally, almost 800 students with disabilities leave school without graduating per day (Kortering & Christenson, 2009). Such statistics are alarming and ought be a call to

action given that students who dropout are much more likely to depend on the welfare system, be unemployed, earn substantially less than peers who at least graduate high school, and are more likely to serve time in prison (Murray & Narranjo, 2008; Rouse, 2005; U.S. Department of Justice, 2003).

Many students leave school in 11th or 12th grade (i.e. approximately 300,000 annually) according to the National Center for Statistics (2009). Given that the event of dropout occurs in high schools, it seems likely that the majority of dropout prevention programs occur in high school (MacIver, 2011). However, research demonstrates that dropout is a process that occurs over time and can be predicted as early as first grade (Alexander et al., 1997). The disconnect of treating student dropout as an event rather than a process may be a serious hindrance to meaningful intervention.

Alterable Variables

While there are numerous variables such as family discord or frequent mobility that can contribute as part of the process for a student to determine that dropout is inevitable, there are several variables that school personnel can influence (Alexander et al., 1997; Reschly & Christenson, 2006). Those variables are attendance, exclusion due to discipline, and failing classes/grade retention (Brown, 2007; Dunn, Chambers, & Rabren, 2004; Kemp, 2006). For example, MacIver (2011) found that more than one-half of all Baltimore City students who dropped out of school had missed more than 20 days of school for three years previous to the student dropping out. Stearns and Glennie (2006) indicated that one reason males are more likely to leave school prior to graduation than females is due specifically to

suspensions, expulsions, and incarceration. Finally, several studies (Bowers, 2010; Neild, 2009; Randolph, Fraser, & Orthner, 2004) reported that grade retention and/or failing Math or English class are significant variables leading to students leaving school before graduation.

Engagement

While much research has focused on reasons why students leave school prior to graduation (i.e. deficit-oriented), prevention of student dropout seems to require studying the critical elements that enable students at risk of dropout to remain in school. For example, social engagement activities, such as being involved in extracurricular activities, have been identified as factors in school completion for students at risk of dropout (Kemp, 2006; Mahoney & Cairns, 1997). In fact, there are several studies that address social engagement including the role adults play in keeping students at risk of dropout in school until completion (Kemp, 2006; Mahoney & Cairns, 1997; Randolph et al., 2004). Further, Knesting and Waldron (2006) found that adult support, in particular adults who were open to helping, communicated caring, knew about students' lives, had high expectations, clear limits, and offered a safe place for students, were reported by students at risk of dropout as important to keeping them in school.

While social engagement is clearly important to students remaining in school, most school districts have policies that require a certain number of credits to be earned in order to graduate and those policies can create seemingly insurmountable barriers to remaining in school (Ehrenreich, Reeves, Corley, & Orpinas, 2010). Despite the importance of social engagement in school completion,

academic engagement is also critical to school completion. Therefore, research which addresses interventions regarding academic engagement may impact high school completion dropout rates.

Self-Determination

A chronic series of negative experiences such a failing grades, frequent discipline referrals, and credit deficiencies related to academic achievement often intertwined with poor attendance can contribute to students losing hope for success and consequently, demonstrating behaviors synonymous with amotivation (Ehrenreich et al., 2010; Legault, Green-Demers, & Pelletier, 2006). Individuals who are considered amotivated typically do not have a sense of purpose or do not associate their behavior with the subsequent outcomes associated with that behavior (Vallerand, Fortier, & Guay, 1997).

Students who have dropped out of school have been reported to exhibit less internal motivation l, perceive a lack of self-control, and consider themselves to be helpless when compared to students who complete school (Legault et al., 2006; Vallerand et al., 1997). Consequently, the chronic failure experience can alter one's personal belief about competence, which can hinder performance and contribute to a pervasive lack of self-determination (Bandura & Locke, Dweck, 2012; Hardre & Reeve, 2003). Given research that indicates that students who dropped out of school lack self-control and demonstrat helplessness, it seems reasonable that one area for intervention might be to enhance the self-determination of students at risk of dropout (Legault et al., 2006; Vallerand et al, 1997).

Self-determination is based on a person acting as the causal agent in his/her life (Wehmeyer & Field, 2007). In other words, a self-determined person seeks to be an autonomous change agent in his/her life (Wehmeyer & Field, 2007). Self-determination is premised on the assumption that an individual's basic needs include competence, relatedness, and autonomy (Weinstein & Ryan, 2011). There are many definitions of self-determination. However, four characteristics are shared among definitions. Those characteristics are autonomous action, self-regulated behavior, interacting with a sense of empowerment, and self-realization through action (Wehmeyer & Field, 2007).

In order for needs such as competence, relatedness, and autonomy to be met, a self-determined person must possess the knowledge and skills necessary to be the causal agent in his/her life (Hoffman & Field, 1994). Finally, motivation for self-determination is considered intrinsic including personal growth, health, or relationships (Weinstein & Ryan, 2011).

Self-determination has been studied from early childhood to transition into adulthood with specific disability populations and also with no regard to disability (Ankeny & Lehmann, 2011; Nonnemacher & Bamabara, 2011; Palmer et al., 2012). Several studies have addressed the perceptions of students with disabilities such as emotional and behavioral disabilities or learning disabilities in regards to their own self-determination (Carter, Lane, Pierson, & Glaeser, 2006; Carter, Trainor, Owens, Sweden, & Sun, 2010). Others have considered how teachers and parents perceive the self-determination of students with emotional and behavioral disabilities in multiple settings (Van Gelder, Sitlington, & Pugh, 2008).

Fortunately, self-determination is a concept that can be taught by creating opportunities to learn, expand, or maintain skills associated with self-determination (Carter et al., 2010). Instruction on self-determination ought include several critical components. Those components include goal-setting, choice-making, decision-making, and problem solving (Lehmann, Clark, Bullis, Rinkin, & Castellanos, 2002; Wehmeyer & Field, 2007). Such skills enable a student to self-regulate, which allows students to identify goals, make choices about goals, make plans to achieve goals, and propose solutions to solve problems (Carter et al., 2006).

One promising intervention for teaching self-determination is the Self-Determined Learning Model of Instruction (SDLMI) (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000). SDLMI focuses on teaching self-directed learning based on teaching students to set goals, develop plans to meet goals, and adjust plans by evaluating information in order to achieve goals (Wehmeyer et al., 2000). SDLMI differs from other self-determination research in that students direct their own learning rather than adults (Wehmeyer et al., 2000).

Several studies have investigated the effects of SDLMI on various outcome measures. For example, Agran, Cavin, Wehmeyer & Palmer (2006) found that students with moderate to severe disabilities were able to access the general education curriculum using goal-setting, self-monitoring, and self-instruction with at least 80% correct responding to chosen educational standards. Other studies using variations of SDLMI as an intervention, found that goal attainment and locus of control were improved (Wehmeyer et al., 2000), improved self-regulation skills during academic tasks and a decrease in inappropriate social and physical behaviors

(Martin, Mithaug, Cox, Peterson, Van Dycke, & Cash, 2003), improved self-regulation and academic engagement along with a decrease in problem behaviors (Lee, Wehmeyer, Palmer, Soukop, & Little, 2008).

As earlier stated, autonomy is a variable often associated with self-determination. Autonomous individuals act based on self-established goals, values, and choices (Weinstein & Ryan, 2011). Autonomous individuals are better able to complete tasks, improve grades, and cope successfully with stressful events (Legault & Inzlicht, 2012; Weinstein & Ryan, 2011). Weinstein and Ryan (2011) also suggest that persons with autonomous orientation may have more resilience and coping skills than those who lack autonomous orientation.

It seems that students who are low in self-determination and having difficulty are likely to struggle with intrinsic motivation since extrinsic motivation has not been adequately established, demonstrate skills necessary to complete tasks, and improve grades (Legault & Inzlicht, 2012; Weinstein & Ryan, 2011). Lacking such characteristics and skills associated with self-determination can lead one to experience academic failure and eventual disengagement from school as failures continue over time.

Therefore, one method for counteracting the experience of chronic school-related failure is to teach self-determination skills such as goal setting, choice, or self-regulation (Eisenmann, 2007). Additionally, given chronic poor academic achievement, focusing on academic success may be a meaningful intervention to alter or interrupt the chronic cycle of failure students at risk of dropout experience (Battin-Pearson, 2000; Ehrenreich et al., 2010).

The intervention for this study (e.g. Plan, Work, Evaluate, Adjust) was created by Martin, Mithaug, Cox, Peterson, Van Dycke, & Cash (2003) and taught to elementary school-aged boys (approximately 7-9 years of age) in a residential treatment facility. Results indicated a decrease in inappropriate social and physical behaviors and an increase in self-regulations skills while completing academic tasks.

Consequently, the pattern of lack of success associated with students at risk of dropout including those who have been identified with emotional and behavioral disabilities appears consistent with a lack of self-determination. Lack of academic success could be associated with lack of work completion, attending to tasks, or self-regulation during instruction. Given the academic engagement focus of this study along with the origin of the intervention rooted in the Self-Determined Learning Model of Instruction (Wehmeyer et al., 2000), this study will operationally define self-determination based on the definition put forth by Wehmeyer et al. (2000) and later cited by Martin et al. (2003). That definition consists of three components: a) setting a goal, b) taking action, and c) adjusting the goal or plan to achieve the anticipated goal. The most critical component of that definition as it relates to self-determination in adjustment. Martin et al (2003) state, "…people learn by adjusting and adjust in order to learn (p.433)." More importantly, "greater control is possible if students knew how to align their decisions, actions, evaluation, and adjustments with self-identified needs and interests" (Martin et al.; p.433).

The proposed study seeks to expand on the work of Martin et al. (2003) by extending the intervention to high school age students who are receiving emotional support. The intervention will focus on academic success by teaching the *plan,*

work, evaluate, and adjust self-determination strategy to students during independent practice. It is hypothesized that teaching 9th and 10th grade high school students a self-directed self-determination strategy during the independent session of a lesson will increase the academic engagement (as measured by increased percentage of time on task, increased work completion and a decrease in redirections back to task) and the success of students learning the strategy. It is further hypothesized that increasing self-determination in students at risk of dropout will contribute to enhanced perceptions of autonomy, competence, and an increased willingness for student participants in this study to persevere toward long-term goals, which may provide some evidence that teaching self-determination skills, specifically goal setting, planning, and adjusting plans, could be a viable intervention to prevent student dropout.

This study will address the following questions:

1. Does a self-determination work intervention improve the academic engagement/performance of students with emotional disabilities' as measured by:
    a. Percentage of work completion,
    b. Time on task
    c. Decreased redirections back to task?
2. To what extent does a self-determination work strategy influence students with emotional disabilities' self-perceptions of self-determined planning and goal setting and attainment?

3. Do the self-reported school experiences of students with emotional disabilities change as a result of a self-determination intervention?

CHAPTER 2: LITERATURE REVIEW

Introduction

There has been considerable focus on education in the United States throughout much of its' history. For example, the launch of Sputnik by Soviet Union in 1957 caused alarm that American students were falling behind their Soviet counterparts in math and science (Darling-Hammond, 2010). In another example, almost 30 years later, Diane Ravitch published *A Nation at Risk,* which offered a stinging critique of the quality of education in the United States (1983). Recently, the performance of students from the United States on international exams has lead to a focus on accountability through test performance (Darling-Hammond, 2010).

A changing world has shifted the educational requirements for employment to exceed a high school diploma in order for individuals to meet basic employability standards (Dunn, Chamber, & Rabren, 2004). For example, in 1967 54% of the economic output in the United States was in manufacturing (Darling-Hammond,

2010). Thirty years later, 67% of economic output in the United States occurred via producing information products (e.g. computers, software, books) and information services (e.g. telecommunications, education, financial services) requiring information typically received through a high school diploma (Darling-Hammond, 2010). Converging with this changing world is the notion that education is the key to social mobility (Rouse, 2005). Therefore, education is critical to not only global economic competitiveness, but for those seeking the opportunity to change social conditions or class.

While there has been a reduction in dropout rates, the reality is that with the dramatic shift from manufacturing to information products and services (Darling-Hammond, 2010), education beyond a high school diploma is increasingly necessary for entry into the workforce (Darling-Hammond, 2010). With economic strength tied to an educated workforce, Landis and Reschly (2011) state, "There is widespread concern over the number of students who drop out of American high schools each year" (p.719).

There has been a decrease in the percentage of students who drop out of school from 14.1% in 1980 to 8.1% in 2009 (National Center for Statistics, 2011). However, 8.1% still accounts for over a half million students, nearly 300,000 of which left in 11th or 12th grade. Low skill, low-income jobs are typically the only choice of employment for individuals who have dropped out of high school (Christle, Jolivette, & Nelson, 2007). Such jobs typically pay poorly and substantially limit income opportunities for students who have dropped out of school (Rouse, 2005).

Statistics regarding high school non-completion are alarming. Students who drop out of school are more likely to rely on social programs such as welfare and unemployment in adult life (Murray & Naranjo, 2008; Rouse, 2005). For example, approximately 50% of adults who have dropped out of school are employed compared to 69% for those with a high school diploma and close to 75% of those with education beyond a high school diploma (Rouse, 2005). Interestingly, only 4.5% of high school dropouts claim unemployment insurance, likely due to the fact that the jobs that were held did not meet the threshold for applying for unemployment insurance (Rouse, 2005). Finally, adults who did not complete school are more likely than other groups to have engaged in moderate to heavy drug use and either perpetrate or be the victim of violence (Beauvais, Chavez, Oetting, Oeffenbacher, & Cornell,1996) and have reported a lower ability to cope with stressful events than graduates (Hess & Copeland, 2001).

In regards to social costs for high school dropout, the average high school dropout contributes approximately $1300 in federal income taxes, $300 in state income taxes, and $1800 in Social Security taxes (Rouse, 2005). Such contributions are approximately one- half of the contributions made by adults with a high school diploma and about $60,000 less than an adult with a high school diploma or $153,000 for an adult with at least a high school diploma over a lifetime (Rouse, 2005). Further, adding just one year of schooling for all high school dropouts would generate an additional $88 billion in lifetime income and income tax revenue (Rouse, 2005). The combined income and tax losses for one cohort of high school dropouts are about $192 billion over a lifetime (Rouse, 2005).

Equally alarming is that approximately one-half of the prison population is comprised of high school dropouts (U.S. Department of Justice, 2003). Finally, median full-time earnings for someone who leaves school prior to graduation is $27,470, while median full-time income for high school graduates is $34,197 (U.S. Census Bureau, 2011). Over the course of a lifetime, an adult without a high school diploma will earn approximately $260,000 less than an adult with a high school diploma given a very conservative formula and as much as $550,000 given a formula that assumes greater growth (Rouse, 2005).

With such alarming statistics, it is without question that researchers have sought to investigate students who dropout of school. However, much of that research has been correlation research with few experimental studies (Lee& Burkham, 2003). Moreover, many studies have been the result of demographic data selected from national databases. As a result, much of what is known about students who dropout of high school is attempts to develop predictive models within the context of the demographic variables collected from this research.

One seemingly unintended consequence of demographic research is that the focus for that research and those attempting to interpret it has been solely on the student and not on (Lehr, Hansen, Sinclair & Christenson, 2003). Recently research has focused on student dropout as a process of disengagement that involves schools, peers, and parents as accomplices to student dropout (Landis & Reschly, 2011; Lee & Burkham, 2003; Leithwood & Jantzi, 1999; Reschly & Christenson, 2006).

In particular, Reschly and Christenson (2006) distinguished static variables related to dropout from alterable variables. Static variables are those that cannot be

changed by schools such as race, gender or socioeconomic status. Alterable variables are those that can be intervened upon such as grade retention, failure, or attendance.

Before addressing the demographic and non-demographic variables associated with dropout, it seems prudent to first explore an operational definition of dropout as well as how student dropout is recorded. Unfortunately, there is no standard operational definition of a dropout that currently exists (Blackorby, Edgar & Kortering, 1991; Kemp, 2006). As a result, it is possible that dropout levels are much higher than reported (Stearns and Glennie, 2006).

How students who leave school prior to completion are recorded may influence the operating definition of "dropout." Kemp (2006), for example, distinguishes between an event method (i.e. the proportion of students who drop out within a year) and a cohort method (i.e. following a group of students expected to graduate at the same time). According to Kemp (2006), the majority of schools report using the event method. The event method is considered less accurate than the cohort method because the cohort method categorizes dropout longitudinally rather than as a single event in a year (Kemp, 2006). The cohort method seeks to identify all students who enter school a particular school and graduate in four years, while the event method is based only on a single snapshot of students who dropout each year. For example, a cohort method would track all students who entered a given high school in 2005 and graduated or did not graduate in 2009. The event method would only count dropouts in 2009 from that given school.

For the purposes of this paper, dropout will be operationally defined as consistent with the Pennsylvania Department of Education (2013) definition. Dropout is defined as "A student who, for any reason other than death, leaves school before graduation without transferring to another school/institution." There are several reasons for using a state definition as the operational definition. First, no formal definition exists in the literature. In fact, it is rare for such a definition to be provided in research. Finally, Kortering and Braziel (1999) used the definition of dropout for the state of North Carolina for research conducted in that state . Given the lack of a formal definition, it seems reasonable to follow Kortering and Braziel's (1999) decision to use a state definition.

The following sections of this review will include research related to demographic variables such as race, gender, or socioeconomic status and non-demographic variables such as attendance, grade retention, successful interventions, student engagement, and the gradual process of student disengagement. Finally, this literature review will also address self-determination and grit as important to school completion for students who at risk of dropout.

Review of Literature

Static Variables Associated with Dropout

Several variables have been associated with student dropout, which schools and school personnel cannot influence. Those variables include socioeconomic status, race, gender, and high incidence disability. Each of those variables will be discussed below.

Socioeconomic Status.

One of the greatest predictors for school dropout is socioeconomic status (Alexander, Entwisle, & Horsey, 1997; Goldschmidt & Wang, 1999; Stearns, Moller, Blauu, & Potochnick, 2007). For example, the National Center for Education Statistics (2011) indicates that when analyzed by family income quartiles, the percentage of students who dropped out of high school in 2009 from the lowest quartile of income was 15.8%. Conversely, only 2.5% of students in the highest quartile of family income dropped out of high school.

Research has supported the statistics regarding socioeconomic status and school completion. For example, Christle et al. (2007) found a strong correlation between poverty and lack of school completion for students. Converging with the conclusion of Christle et al. (2007), Achilles, McLaughlin, and Croninger (2007) found that low socioeconomic status was a strong predictor of a high likelihood of exclusion from school. Newcomb et al. (2002) found a strong correlation between socioeconomic status and school completion. Thus, it appears that low socioeconomic status is a contributor to low rates of attendance and a high likelihood for students to be excluded from school and eventually, school non-completion (McNeal, 1995).

Race.

A second static variable is race. Race appears to play a critical factor in student dropout. The National Center for Education Statistics (NCES) (2011) demonstrates a striking variance in percentage of dropout by race. In 2009, the percent of students dropping out of high school of Asian decent was 3.4%. The

percentage increased to 5.2% for Whites, 9.3% for Blacks, and 17.6% for students of Hispanic origin.

Once again research converges with statistical data from NCES (2011). Christle et al. (2007) found a strong correlation between student ethnicity, poverty and school failure. All three are strong contributing factors to student high school dropout (McNeal, 1995). Additionally, African-American students are more likely to leave school prior to graduation if they have a history of school exclusion such as suspensions or expulsions (Blackorby et al., 1991; Stearns & Glennie, 2003). Interestingly, Newcomb et al. (2002) found that while race was a predictor of school non-completion, it was mediated and influenced by other factors such as socioeconomic status.

Gender.

Both males and females are likely to leave school prior to completion. However, the research indicates that the reasons for student dropout appear different when gender is considered.

Males are more likely to leave school prior to graduation than females (Alexander et al., 1997; MacIver, 2011). Stearns and Glennie (2006) found that exclusionary factors such as suspensions, expulsions, and incarceration are much more likely to impact male students' decisions to quit school before graduating than female students because they are more likely to experience such exclusionary events as part of their compulsory schooling than females. Low academic ability and academic underachievement also are more likely to affect males than females in

their decision to remain in school due to a history of negative experiences with school (Archambault, Janosz, Morizot, & Pagani, 2009).

Additionally, academic variables such as course failure were more likely to predict drop out for males than for females (Newcomb et al.,2002) . Males are also more likely to experience grade retention that females (Bowman, 2005). Females are more likely to be judged as hard working when compared to their male counterparts (Finn & Rock, 1997).

Employment was found to have equal power as a factor for dropout for females and males (Stearns & Glennie, 2006). Coming from a low socioeconomic background and being female was found to be a strong predictor of early dropout (i.e. before entering 11th grade)(Battin-Pearson et al., 2000). Finally, females are more likely to leave school prior to graduation than males for non-school reasons such as premature pregnancy or child care expectations (Croninger & Lee, 2001).

Pittman (1991) found that for students at risk for dropout, social variables differed between females and males. For females, peer interest and social belonging were critical determinants in whether or not a female stayed in school or dropped out of school. The stronger connection a female had to those variables, the more likely she stayed in school. For males, the critical variable was a relationship with school staff that determined the difference between remaining in school and dropping out. Males with stronger connections to school staff were more likely to stay in school.

Students with High Incidence Disabilities

High incidence disability appears to be a strong predictor of risk of school dropout. High incidence disabilities are disabilities that require the judgment of a psychologist based on standardized testing and/or rating scales (Friend & Bursuck, 2002). Those disability categories include speech-language deficits, emotional disturbance, specific learning disabilities or other health impaired (OHI). Mostly commonly, a student with an OHI disability label has been diagnosed with attention deficit disorder with or without hyperactivity (Friend & Bursuck, 2002). Finally, students with high incidence disabilities look exactly like their non-disabled peers (Friend & Bursuck, 2002).

Statistics regarding school completion for students with high incidence disabilities are alarming. In the 2005-2006 school year, forty-three percent of students with emotional disturbance and 38% of students with learning disabilities did not earn a high school diploma (National Center for Education Statistics, 2008). Considering all disability categories, only 56.5% of students with disabilities graduated with a diploma in 2005-2006 (National Center for Education Statistics, 2008). Reschly and Christenson (2006) state that, " Students with learning disabilities or emotional and behavioral disorders (sic) are consistently found to have the highest dropout incidence among special education students and students in general" (p.277). Finally, Kortering and Christenson (2009) state nearly 800 students with disabilities leave school prior to graduation every day.

Blackorby et al. (1991) found that interruptions in schooling disproportionately affected students with emotional and behavioral disabilities. Undesirable student behaviors were a significant contributor to school

interruptions such as suspensions (Christle et al., 2007). Poor attendance, suspensions, and frequent relocations (Scanlon & Mellard, 2002; Sinclair, Christenson, & Thurlow, 2005) are frequently cited as additional reasons for interruptions in schooling for students with emotional and behavioral disabilities. Brown (2007), however, states that another interruption can be time between public and alternative schooling. For example, as much as three months went by for one student in between placements (Brown, 2007).

Dunn et al. (2004) conducted a study examining several key factors related to student dropout. Results indicate that the most predictive factor for leaving school prior to graduation is a learning disability when considering all demographic variables (e.g. gender and race). Students with learning disabilities can confront significant challenges in high school (Kortering & Braziel, 2002). Academic struggles such as performance in reading and math for students with learning disabilities were found to be a significant risk factor for dropout (Murray and Naranjo, 2008). Finally, Kortering and Braziel (2002) found students with learning disabilities also have higher rates of out-of school suspension and grade retention than students who do not have a disability.

Scanlon and Mellard (2002) found the most significant variable related to students leaving school prior to graduation was academic difficulties specifically related to a learning disability. However, Bear, Kortering, and Braziel (2006) revealed findings contrary to both Scanlon and Mellard (2002) and Murray and Naranjo (2008). Bear et al. (2006) found that students' ability to apply critical skills such as motivation to complete homework and class work, attend school regularly

and to avoid suspensions was the critical variable in school completion; not academic skill level. In other words, Bear et al. (2006) seem to be suggesting that skill-based academic difficulties are not the critical factor in dropout, but rather the student's lack of motivation to demonstrate behaviors commensurate with an engaged student. While it is important to focus on academic skill development, it appears that school personnel also need to consider what can be done to increase students' application of critical skills.

Unfortunately, negative projections dominate the chances of student success for students with learning disabilities, students with emotional and behavioral disabilities tend to have the most negative projections away from success of any demographic group despite little differences in standardized academic achievement data (Lane, Carter, Pierson, & Glaeser, 2006; Landrum, Tankersley, & Kauffman, 2003). For example, the most common means of exiting school for all students with disabilities was with a diploma, however, for students with emotional and behavioral disabilities, the most common means of exiting school was dropout (Landrum, Katsiyannis, & Archwamty, 2004).

Variables such as attendance, academic difficulties, and disciplinary exclusion are all likely to be more extreme for students with emotional and/or behavioral disabilities than other categories of students (Landrum et al., 2003). Of all variables that students with emotional and/or behavioral disabilities struggle with, the most persistent and greatest appears to be school attendance (Landrum et al., 2004). For example, Lane et al. (2006) found that students with emotional and

behavioral disabilities had twice as many absences and disciplinary contacts as students with learning disabilities.

One reason why outcomes for students with emotional and/or behavioral disabilities is so bleak is that identification for special education services typically occurs later in their educational career for students with emotional and/or behavioral disabilities than for students with other disabilities (Landrum et al., 2003). In other words, the pattern of negative or socially unacceptable behaviors is not addressed until the pattern becomes too extreme for teachers. As a result, socially unacceptable behaviors become habit for students. As a result of such a delay, it is likely that the behaviors that special educators seek to ameliorate may have served a purpose for students and the late identification for services may provide insufficient time to replace socially unacceptable behavior with socially appropriate behaviors that achieve the same purpose.

Additionally, teachers typically have negative perceptions of students with emotional and behavioral disabilities including their academic ability despite normal intelligence (Lane et al., 2006). Further, students with emotional and/or behavioral disabilities are more likely to be excluded from peers and placed in separate classrooms (Landrum et al., 2004). Such exclusionary practices were found to be a predictor of dropout (Landrum et al., 2004). The combination of late identification, negative perceptions from teachers, and increased likelihood of exclusion from the general education environment seem to contribute directly to alterable variable such as poor attendance and academic difficulties (Landrum et al., 2003; Landrum et al., 2004).

Failure for students with emotional and behavioral disabilities is not limited to school. In a longitudinal study, Wagner and Newman (2012) report that 60.6 percent of students with emotional and behavioral disabilities had been arrested in 2005 and 60.5 percent had been arrested as young adults, while 44.2 percent had been on probation or parole in 2009. The arrest rates are up considerably since 1990. Young adults up to 4 years post high school had an arrest rate of 36% in 1990 (Wagner & Newman, 2012). Such a reliance on the criminal justice system to address socially unacceptable behaviors may negatively contribute to lost opportunities for rehabilitation (Landrum et al., 2003). Consequently, students who have been excluded from the general education environment due to socially unacceptable behaviors are likely to be excluded from general society at some point in their life.

Alterable Variables

While demographic variables appear to be predictive of students who are at risk of dropout, one could argue that it is the variables that occur in school that seem to have the biggest impact. For example, Neild (2009) found that using attendance, grades or both before starting high school could identify 50 percent of dropouts in Philadelphia. Variables such as suspensions, late identification for special education, failing grades, grade retention, and lack of engagement are alterable variables that can be influenced by decisions made by school personnel (Reschly & Christenson, 2006). The following section will discuss the impact of alterable variables on students at risk of dropout.

Attendance/Exclusion

Attendance may be the most significant factor related to school non-completion for students at risk of dropout (Kemp, 2006). For example, Blackorby et al. (1991) found that for students with high incidence disabilities, lack of attendance due to absenteeism or suspensions was the most significant predictor of dropout. MacIver (2011) found that for dropouts in Baltimore City, 90% were absent more than 20 days and 75% were absent more than 40 days. Finally, more than half of all dropouts missed more than 20 days in each of the three years prior to dropping out (MacIver, 2011). Such statistical data leads credibility to the notion that dropout is not a single event, but rather a process over time (Alexander et al., 1997).

Further, Brown (2007) states that lack of attendance is a direct contributor to academic difficulty and a sense of distrust among students and school adults. Not surprisingly, students report that lost classroom time and instruction time leads directly to academic difficulties (Brown, 2007).

With attendance leading to loss of instructional and classroom time, it is not surprising that students who miss considerable time also have poor grades and experience academic failure (Brown, 2007). Academic failure can lead to grade retention.

Grade Retention/ Poor Academic Achievement

In several studies (Dunn et al., 2004; Kemp, 2006; MacIver, 2011) the role of academic difficulty was a strong predictor variable for student dropout. Kemp (2006) found that academic failure was the primary reason for dropout. Battin-Pearson et al. (2000) found that poor academic achievement led directly to dropout and only socioeconomic status was a stronger predictor. However, low

socioeconomic status was not a predictor of poor academic achievement (Battin-Pearson et al., 2000). Finally, poor academic achievement was strongly correlated with a poor social connection to the school (Battin-Pearson, 2000).

MacIver (2011) examined 2008-2009 school year dropouts and found that 92.7% of students failed at least one course and 60% of students failed four or more in the Baltimore City Public Schools. Neild (2009) found that course failure in ninth grade increased odds of dropout by about one-third if students had previously failed other courses. Bowers (2010) found that 90.0% of students who were retained in any grade did not complete school with a diploma. Given that the majority of retentions happen in kindergarten or first grade (Neild, 2009), it is likely that decisions to retain are made without examining long-term effects that retention will have on the student. For example, Randolph et al. (2004) found that retention in first grade was a strong risk factor for dropout for students vulnerable to dropout. Finally, retained students are more likely to come from poorer households and from fewer two parent homes than students who are continuously promoted (Stearns et al., 2007).

Grade retention is a commonly attempted solution to improve academic skills of students from the perspective that the problem resides solely with the student and not the learning environment (Bowman, 2005; Randolph, Fraser, & Orthner, 2004). Unfortunately, grade retention is neither inexpensive nor effective (Jimerson et al., 2006). Much of the decision to retain is the result of teacher assigned grades with little consideration for what those grades mean (Bowers, 2010). Bowers (2010) suggests that grades "may be an accurate assessment of a

student's ability to negotiate the intricacies of the school process" (p.204). Thus, academic failure and subsequent grade retention may reflect the student's ability to navigate the educational system and less a reflection of ability or motivation.

However, Stearns, Moller, Blau, & Potochick (2007) suggest that students who repeat a grade are considerably more likely to dropout than students who are continuously promoted. While grade retention at the time of retention is likely an act that teachers and parents consider helpful to those students (Neild, 2009), grade retention is the most critical predictor of leaving school prior to graduation for high school students for students who stop attending school in early (9^{th} or 10^{th}) grades (Goldschmidt and Wang, 1999) and has been noted as the most powerful predictor of student dropout overall regardless of race (Reschly & Christenson, 2006; Stearns et al., 2007).

Additionally, grade retention seems to have a greater impact on Hispanic and White students than on Black students and their decision to drop out of school (Stearns et al., 2007). When compared to White continuously promoted students, White retained students are 25 times more likely to dropout, and Hispanic students are 24 times more likely to drop out than White continuously promoted students. Interestingly, Black students who are retained are 15 times more likely to drop out of school than continuously promoted White students. Stearns et al. (2007) suggest "the retention decision marks black students as less different than it does retained students of other racial/ethic groups, particularly whites" (p.230). It appears that Black students who are retained demonstrate a self-concept similar with all students who are not retained, while Hispanic and White students who are retained

report a lower self-concept, which may impact their decision to remain in school (Stearns et al., 2007). Regardless, grade retention seems to have a long-term negative effect on students who are retained (Bowman, 2005; Jimerson et al., 2006).

Student Engagement

One area that researchers have shifted their focus to related to school dropout is that of student engagement (Lehr et al 2003). Student engagement became a focus due to several studies pointing to student dropout as a process rather than a one-time event (Alexander et al., 1997, Barry & Reschly, 2012, Landis & Reschly, 2011; Lee & Burkham, 2003; Leithwood & Jantzi, 1999; Reschly & Christenson, 2006). These studies find that student engagement serves as a mediator between the school and student outcomes

Student engagement is a multi-dimensional construct that can be separated into four categories: academic achievement (behaviors specific to the learning process), social (following written or unwritten school rules), cognitive (working to understand complex information), and affective (feelings of belongingness resulting from being involved in school activities) (Barry & Reschly, 2012, Fredericks, Blumenfield, & Paris, 2004, Finn & Zimmer, 2012) Research has indicted that academic and social engagement are the two most critical to student's choosing to remain in school (Reschly & Christenson, 2006). Therefore, this section will focus on academic and social engagement. Both at-risk and protective constructs will be discussed in each section.

Academic Achievement

Though no formal operational definition exists, academic achievement is commonly thought of as the result of student's observable behaviors related to the learning process, such as attentiveness, completing homework, coming to class prepared, and completion of assignments (Christenson & Thurlow, 2004; Finn & Zimmer, 2012). Teachers can consider students who are disruptive or passive participants to be disengaged (Finn & Rock, 1997) and those students were found to have lower achievement scores (Fredericks at al., 2004).

School quality and the education provided are at the heart of academic engagement. Wilcox and Angelis (2011) state, " American high schools have also been the target of critique for inequitable outcomes for particular groups of students (p.138)." Further, Rumberger and Palardy (2005) indicate that students in high achieving schools can expect to learn considerably more than students in lower achieving schools, and that difference does not shrink the inequality gap. Additionally, falling behind in credits is an institutional barrier than has been found to contribute to academic disengagement (Ehrenreich, Reeves, Corley, & Orpinas, 2012). Successfully completing ninth grade has been found to be critical to completing high school (Ehrenreich et al., 2012; Neild, 2009).

Finally, the role of parents contributed to student academic success (Murray & Narranjo, 2008). Parents provided support by being involved in school, encouraged them to finish school, and served as mentors to problem-solving and self-advocacy (Murray & Narranjo, 2008). However, Stearns et al. (2007) did not

find parental participation to be a significant variable in assisting students to remain in school who are at high risk for dropout..

Social engagement

Social engagement relates to a student's sense of belonging in school and can often be measured by observing attendance and social behavior in the classroom or participation in extracurricular activities (Finn & Zimmer, 2012; Fredericks et al., 2004; Peck, Roeser, Zarrett, & Eccles, 2008). Unfortunately, the definition of social engagement remains somewhat vague and lacks differentiation (Fredericks et al., 2004). For the purposes of this discussion, social engagement will include extracurricular activities, peer and adult relationships, teacher support and classroom structure, and the need for autonomy and competence.

Some students have found engagement in the social aspects of school (Stearns et al., 2007). There has been some research regarding the positive influence of extracurricular activities on engaging vulnerable students in school completion (Kemp, 2006; Mahoney & Cairns, 1997; Peck et al., 2008). For example, Peck et al. (2008) found that youth vulnerable to dropout who participated (83%) in both sports and school clubs, sports and volunteering, and school clubs only went on to post-secondary education at a higher rate than not only the average for vulnerable youth (56%), but also above youth who were not considered vulnerable (77%). Such research is critical since students who dropout have been found to be involved in significantly fewer extracurricular activities than peer who complete high school as far back as middle school (Mahoney & Cairns, 1997).

Many students work outside of school. Working can limit the opportunity for students to engage in extracurricular activities since hours that could be spent on extracurricular activities are spent working. The need to work has contributed to some students dropping out of school. For example, Warren and Cataldi (2006) found that high school sophomores who worked more than 20 hours per week were twice as likely to dropout as students who work less.

Several research studies found that involvement in extracurricular activities was positively associated with students staying in school (Kemp, 2006; Mahoney & Cairns, 1997; Peck et al, 2008; Randolph et al., 2004). For example, Randolph et al., (2004) found that more than 90% of students vulnerable to dropout who participated in extracurricular completed high school, compared to 43% of vulnerable peers who did not participate in after school activities. Both Mahoney and Cairns (1997) and Peck et al. (2008) found that activities that required participation more than one time per week demonstrated an increase in social engagement for students vulnerable to dropout, as long as those activities afford opportunities to connect to positive social norms or healthy peer relationships. More specifically, participation in a sport was the only extracurricular activity significantly associated with keeping students at high risk of dropout in school (McNeal, 1995).

Interestingly, many of the protective factors that keep students who are at risk of dropout in school establish social engagement. The following section reviews protective factors for students vulnerable to dropout.

Protective Factors

Several studies have examined the role of protective factors for students at high risk of dropout (Dunn et al., 2004; Knesting & Waldron, 2006;Murray & Naranjo, 2008). Students at high risk for dropout who complete school are likely to see school as relevant to their future due to goals such as college or post-high school vocational training (Dunn et al., 2004; Knesting & Waldron, 2006; Murray & Narañjo, 2008). These students listed a better life, financial independence, continued education and avoiding the negative consequences of dropping out as reasons to stay in school (Knesting & Waldron, 2006; Kortering & Braziel, 2002; Murray & Narranjo, 2008). As a result, students at high risk for dropout were willing to seek support from teachers in order to complete school (Murray & Narranjo, 2008).

Students who were able to graduate despite being at high risk for dropout demonstrated a willingness to follow school rules (Knesting & Waldron, 2006). Students learned and followed the rules, took responsibility for and resisted the negative influence of peers (Murray & Narranjo, 2008; Knesting & Waldron, 2006). In one study (Murray & Narranjo, 2008), students articulated specifically avoiding peer relationships with other students who did not share the same goals for school completion.

Adult Support as a Protective Variable

One salient protective variable associated with maintaining social engagement was found to be a person in the school, most often a teacher, coach, or administrator, considered as helpful or having a class that was considered helpful (Dunn et al., 2004; Ehrenreich et al, 2012; Knesting & Waldron, 2006; Kortering &

Braziel, 2002; Orr & Goodman, 2010). Interestingly, Knesting and Waldron (2006) found that students identified specific teachers or administrators as helpful, while teachers consistently identified programs as most helpful for students at risk for dropout. There appears to be a disconnect between what is of critical importance for students and the perspectives of teachers.

Students identified the following characteristics from adults in educational settings as essential to their success: open to helping, communicating caring, knowing about students lives, having high expectations, establishing clear limits, and providing a safe place for students (Ehrenreich et al., 2012; Knesting & Waldron, 2006). Such behaviors create an emotional connection and provide a sense of support for students, which increase the likelihood they will stay in school (Fredericks et al., 2004).

Teacher Relationship

It is critical for teachers to establish a relationship that has the right balance between focus on academics, relationships, and establishing a positive environment. For example, Frederick et al. (2004) indicated that if a teacher focuses solely on academics and establishes a negative social climate, students will disengage from learning. However, too much attention to the social climate without a focus on academic rigor will equally lead to academic disengagement (Fredericks et al., 2004). Finally, Kortering and Braziel (2002) found that students reported that teachers who provided hands-on activities and "took the time to explain things were most helpful (p. 184)."

Lack of a positive relationship with an educator can have a negative effect on a student's decision to dropout or stay in school (Christle et al., 2007; Kortering & Braziel, 1999; Reschly & Christenson, 2006). For example, Kortering and Braziel (1999) report than only 11% of the participants in their study actually spoke to a teacher or administrator prior to deciding to drop out of school. Croninger and Lee (2001) cite disconnection from teachers as a significant variable to the gradual disengagement for students at high risk for drop out, while Pittman (1991) found that relationships with staff were critical for preventing dropout.

Converging with Croninger and Lee (2001), Reschly and Christenson (2006) found that student academic and social engagements are the most critical variables for students who are at high risk for dropout. The necessary emotional support, encouragement, and guidance for both personal and academic issues can come from teachers (Croninger & Lee, 2001). However, Leithwood and Jantzi (1999) found that when compared to family educational culture, the impact of teacher and/or administrator relationships with the student was not significant suggesting that variables outside of school have a greater impact on a student's decision to remain in school than the relationships formed with the student's teachers or school administrators.

Social Capital

The importance of student engagement has prompted some researchers to look at social capital. Social capital refers to "small networks of relationships and broad societal patterns of interactions" (Croninger & Lee, 2001; p.553). Social capital can involve in-school relationships with teachers or administrators and

involvement in extracurricular activities or relationships outside of school such as family members, resources or community support (Kortering & Braziel, 2002; Lee & Burkham, 2003). Students who have high social capital with teachers demonstrated the highest likelihood to complete high school, especially if the student is both an academic and a social risk for drop out (Croninger & Lee, 2001; Lee & Burkham, 2003; Lever, Sander, Lombardo, Randall, Axelrod, Rubenstein, & Weist, 2004). However, Lee and Burkham (2003) found that to be true only for schools of small to moderate size (up to 1500 students).

It appears that schools have a tremendous opportunity to influence school completion for students vulnerable to dropout. Numerous factors found to be protective can and often do exist in schools. Factors such as positive relationships with teachers and coaches as well as extracurricular activities provide needed access to positive role models and caring adults, which engages students vulnerable to dropout to remain in school (Ehrenreich et al., 2012). Unfortunately, many students do not experience those protective factors at all or in sufficient degree and ultimately, leave school prior to completion. The following section will explore the experiences of students who dropped out of school.

Experiences of Students At Risk of Dropout

As earlier mentioned, dropout is not a one-time event (Alexander et al., 1997). Instead, dropout is process that occurs over time (Alexander et al., 1997; Reschly & Christenson, 2006). Whether directly school-related (i.e. grade retention, attendance) or not directly related to school (i.e. race, socioeconomic status),

repeated events/ stressors over time can lead to student dropout through a complex process (Alexander et al., 1997; Bickerstaff, 2010).

School experiences with the bureaucratic organization of a typical school can overwhelm students at risk for dropout (Neild, 2009). Students report fear and discomfort within the school environment as well as having difficulty developing meaningful relationships with peers or caring adults (Bickerstaff, 2010). For example, female students report that they described school as a place where they were treated as if they were invisible (Poyrazli et al., 2008). Further, females who have given birth and returned to school reported that they were excluded from certain activities (Ehrenreich et al., 2012).

Schools structural barriers also have a negative impact on students' academic achievement. Ehrenreich et al (2012) indicated that school policies with regards to graduation create insurmountable barriers due to course failure, credit deficiencies or graduation exams. Bickerstaff (2010) found that a lack of a caring adult and low expectations from adults were linked directly to dropout. For example students reported that adults acted as disciplinarians and not mentors (Bickerstaff, 2010). Students did not believe that school was a place they were accepted or felt a sense of belonging (Bickerstaff 2010). At the point of dropout, "students get caught up in an accelerating spiral of failure...arriving at the point where they just stop caring, lose hope,...(and) conclude the only option is to dropout" (Ehrenreich et al., 2012, p.202).

For students with learning disabilities, the impact of just school-related stressors can have a lasting emotional and impact on identity and self-concept (Orr & Goodman, 2010). Students described their K-12 school experiences with words

such as " feeling stupid," "embarrassed," and "ashamed" (Orr & Goodman, 2010). Such experiences began at an early age and lasted beyond into a postsecondary setting (Orr & Goodman, 2010). Such experiences can lead to feelings of being disconnected to the school and loss of control over their lives, particularly when the event is a change in placement (Brown, Higgins, Pierce, Hong, & Thoma, 2003).

Such constant and chronic negative experiences seems to substantially limit and/or alter the goals of a student at risk of dropout; their impressions of themselves and their abilities become limited as a consequence of experiencing rejection and failure within the school experience. For example, students report disappointment at not meeting their goal of graduation from high school (Bickerstaff, 2010). Such regret seems to linger with students beyond high school, which may indicate the value of graduation for students who do not graduate (Bickerstaff, 2010).

These constant and chronic negative school experiences can lead to powerlessness, meaninglessness, estrangement, and a sense of rejection that leads to behaviors beyond social norms (Brown et al, 2003). Hess and Copeland (2001) found that students who dropped out of high school had experienced more life changing events and had reported experiencing more stress than students who completed school. Such a finding seems to converge with research (Alexander et al., 1997; Reschly & Christenson, 2006) that suggests dropout is a process over time.

Coping Strategies

Of interest are the differences between the coping strategies used by students who dropout in relation to those who finish school. Hess and Copeland (2001)

found that students who dropout opt for strategies that involve other people. They are more likely to engage in social activities, seek professional support, and physical diversions than students who graduate. Students who graduate, however, are more likely to cope with self-reliance and positive imagery (Hess & Copeland, 2001). The choice of coping strategies for students who dropout lends one to question if students who dropout from school can be so overwhelmed with stressors that they need outside intervention or have the knowledge or self-concept to engage in self-reliance or positive imagery. Their choice of strategies seems to indicate a desire to seek solutions in the "other" rather than within themselves.

Motivation

With the myriad of challenges facing students at risk of dropout from both outside and within the school environment, motivation is an important variable for consideration. Individuals who lack motivation can be considered amotivated (Legault, Green-Demers, & Pelletier, 2006). Amotivated individuals typically act without any sense of purpose and cannot associate the connection between their behavior and the outcome associated with the behavior, cannot predict consequences of their behavior, and find behavior to be outside of their control (Vallerand, Fortier, & Guay, 1997; Legault et al., 2006).

Furthermore, students who lack motivation perceive a loss of control over their lives and/ or situations and perceive a sense of helplessness (Legualt et al., 2003). Vallerand et al. (1997) found that students who drop out of school demonstrate significantly less intrinsic motivation than students who complete school. Additionally, female students reported more intrinsic motivation for

knowing, accomplishing, and experiencing than their male counterparts (Vallerand et al., 1997). It is possible that amotivation may result from an individual with a fixed mindset, experiencing repeated failure, which destabilizes one's personal belief and hinders performance, or lacking in self-determination (Bandura & Locke, 2003; Dweck, 2012; Hardre & Reeve, 2003). Both constructs will be further elaborated on briefly below. However, one additional variable, autonomy, is critical to engagement or motivation to complete tasks and will be discussed at length later in this review (Legault & Inzlicht, 2012).

One possible explanation for why some students are able to complete school despite continuous setbacks over time and some are not able to overcome such obstacles might have something to do with mindset. Mindsets are defined as "people's lay beliefs about the nature of human attributes, such as intelligence or personality" (p.615; Dweck, 2012).

Dweck (2012) establishes two categories of mindsets. The first is a fixed mindset. The second is a growth mindset. People with a *fixed mindset* tend to believe their intelligence or personality, for example, are fixed and cannot change. They are more likely to be less resilient when compared to those with a growth mindset when encountering challenges or setbacks since the setback is evidence of their own inability (Dweck, 2012). Further, those with a fixed mindset tend to act in a defensive manner with the intent of avoiding meaningful failure (Hong, Chiu, Dweck, Lin, & Wan, 1999). Caprara et al. (2008) state, "There are no adaptive benefits to being immobilized by self-doubts about one's capabilities and belief in

the futility of effort" (p.533). It is possible that behaviors related to amotivation may be due to a person having a fixed mindset.

Those with a *growth mindset* tend to believe that setbacks are opportunities to learn, grow, and develop skills or qualities. For them, setbacks are not reflective of one's person, but rather a part of the learning process (Dweck, 2012). Consequently, a person with a growth mindset may demonstrate increased engagement toward a goal since he/she is likely to view the challenge as nothing more than a challenge.

For example, Blackwell, Trzesniewski, and Dweck (2007) found that adolescents who held beliefs that endorsed intelligence as a growth rather than fixed construct demonstrated increased math grades over students who endorsed intelligence as a fixed construct. Not surprising, such patterns only emerge in time of challenge and/or setback (Blackwell et al., 2007). Such motivational beliefs may not emerge until a challenge becomes a prominent obstacle to a student's success (Blackwell et al., 2007).

Research has also examined the impact of self-determination on students' intentions to persist or drop out of school (Hardre & Reeve, 2003). Hardre and Reeve (2003) found that students who perceived themselves to be self-determined and competent were more likely to engage and persist in school than their peers who did not identify themselves as self-determined and/or competent. As a result, it seems critical to consider dropout not just as a result of poor attendance or academic achievement, but also as related to student motivation (Hardre & Reeve, 2003).

One important concept emerges out of the research of Blackwell et al. (2007) and Hardre & Reeve (2003), which is the importance of the teacher's role in establishing an autonomous classroom climate. Autonomy support "recognizes the importance of moderate structure and guidance, while emphasizing the benefits of giving students freedom, volition, and responsibility for themselves" (p.569; Legault et al., 2003). Additionally, educators do have influence over variables such as educational aspirations, achievement, and attitude toward school (Eisenmann, 2007). For example, a classroom that supports the autonomy necessary for self-determination would provides opportunities for students to take risks and learn from mistakes (Eisenmann, 2007).

Given the impact of poor academic achievement on students at risk of dropout, one avenue in prevention or intervention might be to focus on increasing the academic success of students at risk of dropping out (Battin-Pearson et al., 2000). One method for focusing on academic success, increasing motivation, and potentially preventing student dropout that may have promise is self-determination. The next section will provide an overview of self-determination with more in-depth research review as self-determination pertains to providing intervention for students at risk of dropout.

Self-Determination

Self-determination is a critical skill for youth to develop since it includes developing skills, such as self-regulation, that are associated with accomplishing goals in life (Eisenman, 2007). The origin of self-determination theory is based on the assumption that, "all individuals have natural, innate, and constructive

tendencies to develop an ever more elaborated and unified sense of self" (Ryan & Deci, 2002; p.5). Consequently, an individual acts autonomously as a causal agent in his/her own life (Wehmeyer & Field, 2007). A self-determined person acts as the change agent in his/her own life (Wehmeyer & Field, 2007).

Self-determination presumes that individual's basic needs include competence, relatedness, and autonomy (Weinstein & Ryan, 2011). Based on that presumption, a self-determined individual must possess the knowledge and skills necessary to make decisions within his/her own control (Hoffman & Field, 1994). Self-determined motivation is intrinsic, including goals for personal growth, health, relationships, and community as opposed to goals that are material or social in nature (Weinstein & Ryan, 2011).

Self-determination theory also posits that social-contextual factors can hinder or prevent self-determination from becoming actualized in specific individuals or situations (Ryan & Deci, 2002; Wehmeyer & Field, 2007). For example, students with disabilities are often viewed as needing protection, which often leads to others making decisions for those persons (Hoffman & Field, 1995). It is common for students with disabilities to have their educational programming decided for them and for that programming to be deficit-oriented, rendering those students few or no opportunities to learn how to make decisions, anticipate consequences, and learn from mistakes (Hoffman & Field, 1995). As a result, many students with disabilities are rather adept at identifying their weaknesses and limitations, but find it difficult to identify their strengths (Wehmeyer & Field, 2007). Additionally, teachers, parents, and others who work with youth with disabilities

often do not have the appropriate training and understanding of self-determination to be effective facilitators of self-determination skills for youth with disabilities and can undermine students' perceptions of competence and autonomy (Vallerand, Fortier, & Guay, 1997; Denney & Daviso, 2012).

Self-determination also includes knowledge of one's own strengths, weaknesses, preferences, and dreams or self-awareness (Hoffman & Field, 1995; Houchins, 2002). Such knowledge contributes to planning for personal goals, determining how to achieve those goals, taking action, using social skills and anticipate consequences from actions (Hoffman & Field, 1995; Houchins, 2002).

Self-determination has four critical characteristics. Those characteristics include autonomous action by an individual, self-regulated behavior, interacting with a sense of empowerment, and self-realization through action (Wehmeyer & Field, 2007). Autonomous actions occur when an individual can act independently according to preferences and interests within the context of interdependence with external influences (Wehmeyer & Field, 2007). Wehmeyer and Field (2007) state, "Self-regulated people make decisions about what skills to use in a situation, examine the task at hand and their available repertoire, and formulate, enact, and evaluate a plan of action, with revisions necessary" (p.5).

Teaching self-determination has been well researched from early childhood through transition into adulthood and has successfully developed skills in students with low incidence disabilities such as intellectual disabilities to emotional and learning disabilities (Ankeny &Lehmann, 2011; Carter, Trainor, Owens, Sweden, &Sun, 2010; Nonnemacher & Bambara, 2011; Palmer et al., 2012). Much of the

research has been non-categorical (Ackerman, 2006), but some studies have been conducted specific to students within a disability category.

Transition

Post-secondary transition is a critical component to success for any student, but is even more critical for students with disabilities, who may not have had sufficient opportunities to develop or practice self-determination during their academic career. In a study of students who participated in a community college self-determination transition program, Ankeny and Lehmann (2011) found that participants initially lacked self-awareness. Participants could not identify their disability, did not know why they qualified for special education services and programming, felt confused and left behind once special education programming no longer existed at the college level, and did not gain a valuable understanding of themselves due to their passive role in special education (Ankeny & Lehmann, 2011). They found themselves to be benefactors rather than causal agents in regards to special education planning and services (Ankeny & Lehmann, 2011).

Despite the necessary goal setting that is involved in the Individualized Education Plan process (IEP), participants stated that their parents or grandparents not teachers taught them goal-setting behavior through demonstration (Ankeny & Lehmann, 2011). Further, only one of the participants identified contributing significantly to the IEP process in their senior year of high school (Ankeny & Lehmann, 2011). While learning goal setting behavior from family members is a positive, the fact that participant's did not report at the very least instruction on goal-setting from special educators or educators in general, further lends credence

to the proposition that special education is a passive school experience in which adults do rather than encouraging and teaching the student to do for him/herself and does not adequately prepare students for transition to the post-secondary world in those instances (Deci, Hodges, Pierson, & Tomassone, 2001).

Autonomy and Self-Determination

As suggested earlier, autonomy is a by-product of self-determination. An autonomous orientation includes acting based on interests, goals, values, and a sense of choice (Weinstein & Ryan, 2011). Controlled orientation, in contrast, includes self-regulation based on external contingencies (Weinstein & Ryan, 2011). Successfully acting with autonomy requires self-regulation. Lagault and Inzlicht (2012) define self-regulation is the "ability to control and restrain impulses and habits…"(p.1). Not only are those who act autonomously better able to attend to tasks, complete tasks, and improve grades, but those with an autonomous orientation are better able to fully process stressful events than those with a controlled orientation (Legault & Inzlicht, 2012; Weinstein & Ryan, 2011). Further, Weinstein and Ryan (2011) suggest that persons with an autonomous orientation have more resilience and better adaptive coping skills than those with a controlled orientation. Autonomous individuals are also more likely to see stress as challenging, less likely to perceive a stressor as a threat, less likely to demonstrate defensiveness and/or denial when faced with self-relevant information (Legault & Inzlicht, 2012; Weinstein & Ryan, 2011).

The pursuit of intrinsic goals also leads to more life satisfaction and psychological satisfaction since goals are based on outcomes and not on material

rewards as opposed to the pursuit of extrinsic goals such as monetary rewards (Deci et al., 1992; Vallerand et al., 197; Weinstein & Ryan, 2011). When an autonomous individual does not meet a goal, the individual is likely to experience an increase in attention and emotional reactivity to the situation allowing in order to adapt to the environment, reconsider the behavior, and attempt to improve his/her performance (Legault & Inzlicht, 2012). Further, an autonomous orientation leads to a sense of competence, which tends to correlate with self-regulation and autonomous behavior (Deci et al., 1992; Weinstein & Ryan, 2011). A sense of competence during stress improves coping and flexibility improving the likelihood of a positive outcome (Weinstein & Ryan, 2011).

For example, Legault and Inzlicht (2012) found that both autonomous and controlled individuals approach tasks with motivation, but differed by the autonomous individuals demonstrating more confidence and effort than the controlled individuals. Such a finding may have implications for school completion. Vallerand et al. (1997) found that not only was a lack of intrinsic motivation important, but there was also a concomitant lack of self-regulation in students who had intended to drop out or dropped out of school. Engaging in behaviors that are in agreement with one's goals seems to improve effort, attention, and confidence in completing a given task.

Perceptions of Self-Determination

Little research has been conducted on the perceptions of self-determination with students who have emotional and behavioral disorders and learning disabilities (Carter et al., 2006; Carter et al., 2010). One potential reason is that

students with emotional and behavioral disabilities often demonstrate social skill deficits and challenging behaviors that may lead to placement in more restrictive educational settings than the general education classroom (Carter et al.,2006; Houchins, 2002). Such restrictive settings often provide greater structure and less choice than less restrictive settings thereby limiting opportunities for self-determination opportunities (Houchins, 2002; Van Gelder, Sitlington, & Pugh, 2008; Carter et al., 2010).

Several studies have examined the perceived self-determination of students with high incidence disabilities such as emotional and behavioral disabilities and learning disabilities (Carter, Lane, Pierson, & Glaeser, 2006; Van Gelder et al., 2008; Carter et al., 2010). More specifically, Van Gelder et al. (2008) compared perceived self-determination of 16-19 year old students with emotional and behavior disabilities across settings. Those settings were a general education high school, a separate day educational facility, and a residential facility. Teachers, parents and students completed the *Self-Determination Battery (*Hoffman, Field, and Sawilowsky, 2000) Van Gelder et al (2008) found that students across all settings rated themselves as moderately self-determined with students in the residential facility rating themselves as the most self-determined. Parents, however, rated students in the general education high school as the most self-determined, with students in the separate day educational facility rated as the least self-determined by parents. Finally, teachers rated students in the general education high school as most self-determined than teachers in other settings. Students in the separate day education

facility and residential facility were rated less self-determined than students in the general education setting.

Two studies examined the perceived self-determination of students with learning emotional and behavioral disabilities (Carter et al, 2006; Carter et al., 2010). Carter et al. (2006) examined the capacity, perceptions, and opportunities for self-determination at school and at home for students with learning disabilities and students with emotional and behavioral disabilities. Students, teachers, and parents completed the *AIR Self-Determination Scale (Wolman et al., 1994).* Results indicated that teachers rated students with emotional and behavioral disabilities as having less self-determined ability, knowledge, and perceptions of self-determination than students with learning disabilities (Carter et al., 2006). Finally, students with emotional and behavioral disabilities were found to have fewer opportunities to engage in self-determined behavior at school and at home.

Carter et al. (2010) examined teacher and student perceptions of student self-determination capacity, the association of social skills and problem behaviors on capacity and opportunity for students to engage in self-determination behaviors in school and at home using the *AIR Self-Determination Scale (Wolman et al., 1994).*

Results indicated that teachers perceived students with learning disabilities to have greater capacity and more opportunities than students with emotional and behavior disabilities who exhibited problem behaviors. Further, females were perceived by teachers to have a greater capacity than males to be self-determined and social skills were positively associated with self-determination capacity(Carter et al., 2010). Carter et al. (2010) suggest that greater social competence may

improve opportunities for students to practice self-determination as well as opportunities for self-determined behavior to be positively received by others. Further, educational programming for students with emotional and behavioral disabilities typically is focused on ameliorating problem behaviors and not on providing opportunities for practicing self-determination (Carter et al., 2010).

Regarding the importance of providing self-determination instruction within the classroom environment, special educators reported valuing the importance of such instruction much more highly than their general educator counterparts (Carter et al., 2006). However, no difference was found between general and special educators in how often self-determination skills are taught, which may indicate that despite a high perceived importance, little consideration is given to incorporating self-determination instruction into lesson during lesson planning.

Interestingly, students perceived themselves to be more self-determined than their teachers' perceptions with a wider discrepancy between student and teacher for students with emotional and behavioral disabilities than students with learning disabilities (Carter et al., 2006; Carter et al., 2010). Such a finding may speak to the reference point of the person being asked to assess the self-determination of the student. For example, teachers may only see students in one setting and not in other environments in which the students may be more self-determined so, teacher ratings may be specific to one environment and students may be more self-determined in other areas such as home or in elective classes (Carter et al., 2006; Carter et al., 2010). It is equally possible that students with learning disabilities are in less restrictive settings and have more opportunities to

practice self-determination skills than students with emotional and behavioral disabilities (Carter et al., 2010). Carter et al. (2006) also suggest that students with emotional and behavioral disabilities have difficulty evaluating their behavior against behavioral norms within a given environment, which may lead to the significant gap in ratings between students and adults. As a result, students may perceive their behavior to be more self-determined than it actually is or student problem behaviors may obfuscate teacher perceptions of student self-determination, which may suppress teacher perceptions of student self-determination.

One variable limiting the validity of the perception scales is the influence of setting on perceptions. For example, one surprising finding in the Van Gelder et al. (2008) study was that rated perceptions of self-determination from teachers and parents were higher for students in a more restrictive residential setting than in in the separate day facility. Van Gelder et al (2008) hypothesize that the increased structure of a residential facility may have had an influence on the adult's perceptions of student self-determination.

Another possible explanation related to the setting as a confounding variable could be the importance of positive relationships between teachers and students. Positive relationships between teachers (adults) and students have been found to be influential in the development of self-determination skills (Field & Hoffman, 2012). Vallerand et al. (1997) suggests that teachers, parents, and school administrators influence student perceptions of autonomy and self-determination by providing an environment that is autonomy supportive. Karvonen et al. (2004) in a qualitative

study found that having a person such as a mentor teacher, parent, case manager, or counselor present who deems self-determination important increases the likelihood of improved practices and increased self-determination skills of students.

The importance of positive teacher-student relationships found in self-determination research (Field & Hoffman, 2012; Karvonen et al., 2004, Vallerand et al., 1997) seems to converge with student dropout research. Croninger and Lee (2001) found that student disconnect with teachers was a significant variable for dropout. Several other studies have linked school completion for students at risk of dropout to teacher-student relationships comprised of support, communicating caring, having high expectations, and providing a safe place (Knesting & Waldron, 2006; Eisenmann, 2007; Murray & Narranjo, 2008). In contrast, Vallerand et al. (1997) suggest that students with or without disabilities who do dropout of school report more negative teacher-student relations than students who complete school.

The issue of relatedness extends beyond high incidence disabilities, Nonnemacher and Bambara (2011) conducted a qualitative study of adults with intellectual and developmental disabilities regarding how relationships with support staff members from disability service providers. Participants identified the quality of interpersonal relationships including trust with service providers, support strategies that encouraged self-determination, how support staff used their power, and settings in which the participants lived and worked (Nonnemacher & Bambara, 2011). It seems apparent that the relationships developed by those in positions of power (teachers, support staff) have considerable influence on the self-determination development of persons with disabilities.

Opportunities for Self-Determination

Findings seem to indicate that students with disabilities (regardless of disability) demonstrate lower self-determination knowledge and skills than non-disabled peers (Carter, Lane, Pierson, & Stang, 2008). It seems that increasing the restrictiveness of a setting without purposeful consideration of self-determination opportunity does little to improve the self-determination of students with disabilities. In fact, restrictive placements may be detrimental. Positive social skills were strongly associated with self-determination by teachers suggesting that social competence may increase the likelihood that the attempts of a student to assert self-determination will be positively received by adults in the environment (Carter et al., 2010).

More opportunities for students with disabilities to improve self-determination are likely to exist in a neighborhood school with a continuum of services extending from the general education classroom to special education classrooms (Carter et al., 2008). Carter et al. (2008) looked at both general education and special education teacher perceptions of self-determination skills. The researchers found that even though special educators placed higher value on self-determination skills for students with disabilities, both general and special education teachers were highly in favor of promoting skills and opportunities for self-determination (Carter et al., 2008). However, the classroom environment must promote autonomy by offering choice, interest, and support independent actions (Legault & Inzlicht, 2012). Other variables that positively influence autonomy

within a classroom include skill-specific positive constructive feedback, challenges, high expectations, and relatedness (Weinstein & Ryan, 2011).

However, Carter et al. (2008) caution that simply placing students with disabilities in the general education classroom is inadequate for increasing the self-determination skills of those students. Agreeing with Carter et al's (2008) caution, Lee, Wehmeyer, Palmer, Soukop, & Little (2008) found that self-determination status was a poor predictor of access to the general education curriculum. More specifically, high self-determination skill was not indicative of success or placement in a general education classroom (Lee et al., 2008). Rather, the deciding factor for inclusion in the general education environment was related to grade level standard (Lee et al., 2008). If a student was on grade level, the student could be included. If the student was not on grade level, the student was excluded from a general education opportunity. However, self-determination status was a strong predictor of increased student academic engagement and decreased competing behaviors such as classroom disruptions (Lee et al, 2013).

One discouraging finding from the Lee et al. (2013) study was that there was a pervasive lack of curriculum modification in the general education classroom and that access to the general education classroom was based on grade level performance. Such a structure is cause for concern as it may limit opportunity for self-determined students of accessing opportunity to practice self-determination skills (Lee et al., 2008). Opportunity without opportunity for success is an unlikely recipe for self-determined growth.

For example, Houchins (2002) conducted an intervention by instructing incarcerated adolescents on self-determination knowledge and found no significant changes for the experimental group compared to the control group in self-determination knowledge. One half-day of training for staff who would implement the curriculum was provided. The curriculum was compressed from 16 weeks to four and a half weeks. It is possible that the restrictiveness of incarceration limited opportunities for practice and generalization, thus, inhibiting the outcome of the intervention (Houchins, 2002). However, contrasting the results of Houchins (2002), Wehmeyer, Palmer, Shogren, Williams-Diehm, and Soukop (2013) found that self-determination instruction for students with intellectual disabilities and learning disabilities over a three year period did indicate significant change in students in the experimental group as opposed to students in the control group.

Two significant variables distinguish the Houchins study from the Wehmeyer et al. (2013) study. The first is time. Houchins (2002) provided instruction for four and one-half weeks, while Wehmeyer et al. (2013) provided instruction for three years. The second difference is the environment. As earlier indicated, the Houchins (2002) study was conducted in a prison, while the Wehmeyer et al. (2013) study was conducted in several neighborhood high schools. Opportunity for self-determination generalization may be the critical variable since merely developing capacity (i.e. instruction) without practice and feedback is insufficient without environmental opportunity and support from adults (Wehmeyer et al., 2013).

Self-Determination Instruction

Fortunately, self-determination can be taught by providing opportunities to "acquire, expand, and maintain the skills and behaviors to promote self-determination" (p.68; Carter et al., 2010). Learning many of the critical components to self-determination occurs best while the student is interacting with the environment and not solely through a direct or explicit instruction model (Wehmeyer & Field, 2007). However, explicit instruction in knowledge, skills, and beliefs of self-determination with modeling and opportunities for practice is critical for self-determination learning to take place (Karvonen, Test, Wood, Browder, & Algozzine, 2004; Wehmeyer & Field, 2007).

According to research (Lehmann, Clark, Bullis, Rinkin, & Castellanos, 2002; Wehmeyer & Field, 2007), there are several critical components to instruction promoting self-determination. Components such as goal-setting, choice-making, decision-making, and problem solving all lead to students learning self-regulation for their behavior and lives (Lehmann et al., 2002; Wehmeyer & Field, 2007). Wehmeyer and Field (2007) suggest that when teaching goal setting, goals should be achievable, measurable, have a defined timeframe with expected outcomes.

In regards to choice-making, instruction is needed for developing awareness of preferences, realizing choices among preferences is an option, defining the choice, setting a goal or expectation, developing alternative choices, considering strengths and limitations of choices, and choosing the alternative that best matches with student's goal (Wehmeyer & Field, 2007). In teaching decision-making skills, it is good practice to teach the skill when negative consequences are limited in scope and degree in order to build proficiency in the skill (Wehmeyer & Field, 2007). For

problem solving, steps include, but may not be limited to, defining the problem, discussing emotions related to the problem, developing alternatives with consequences, and deciding on a course of action (Wehmeyer & Field, 2007). Agran, Storey and Krupp (2010) suggest that of all these components, choice making is the most important element and needs to be taught within established systems to support meaningful choices. As a result, "failure is a learning experience only if it followed by success" (Wehmeyer & Field, 2007; p.85).

Self-regulation enables students to identify goals, develop a list of tasks to achieve the goal, making choices about how to achieve the goal, identify and define the problem, consider solutions, make judgments about the chosen solution and attempt to solve the problem (Carter et al., 2006; Wehmeyer & Field, 2007). Reasonable mastery over such skills can provide students the opportunity to exert control over their lives (Wehmeyer & Field, 2007).

Finally, Wehmeyer and Field (2007) suggest that students must "possess a reasonable understanding of their strengths, abilities, unique learning and support needs, and limitations"(p.35). Such a skill set ought enable a student at risk of dropout to interact autonomously with his/her environment in a manner that will enable him/her to act as the causal agent in his/her life. Such autonomy ought increase attention to task, increase time studying, have more questions asked by the student and see improved grades (Legault & Inzlicht, 2012).

Effects of Self-Determination

The following section will examine the results of intervention studies related to self-determination. Much of the research reviewed involved a self-determination

intervention model such as *Take Charge* or *Beyond High School* (Geenen et al., 2013; Palmer, Wehmeyer, Shogren, Williams-Diehm, & Soukop, 2012). .

Algozzine, Browder, Karvonen, Test, & Wood (2001) conducted a meta-analysis on 51 studies that promoted at least one component of self-determination. Group design studies yielded an effect size of 1.38 so most studies demonstrated small changes in outcome measures (Algozzine et al., 2001). Greater effect was found with single subject design with no overlap of data point between baseline and intervention found in seven of the 18 interventions examined. One conclusion from this meta-analysis included choice making and self-advocacy as a frequent intervention theme (Algozzine et al., 2001). More specifically, choice making was the intervention chosen for students with intellectual disabilities and self-advocacy was the intervention for students with learning disabilities or mild intellectual disabilities (Algozzine et al., 2001).

One additional conclusion is that only seven of the 51 studies looked at quality of life outcomes after the intervention. Such a finding is surprising since improving quality of life seems to be the intent of self-determination theory.

One shortcomings from the meta-analysis (Algozzine et al., 2001) is that most of the research was conducted with adults or adolescents. Very little research was conducted with younger children. A second shortcoming from this meta-analysis is that most of the studies focused on one or two components of self-determination. At the time, it appears that research on self-determination curriculums had not yet been conducted.

Geenen et al. (2013) conducted a study of *Take Charge*, a two-component intervention that incorporated individualized coaching to apply self-determination skills and group mentoring for students with special education needs that were in foster care. Results indicated benefits for educational planning knowledge, and engagement, and reduced anxiety and depression compared to the baseline group (Geenen et al., 2013). However, Geenen et al. (2013) could not report significant effects for changes in self-determination using the AIR Self-Determination Scale (Wolman et al., 1994). The Parent AIR Scale reported significant positive changes, however, the Teacher and Student AIR Scales did not demonstrate significant change between the pre- and post- conditions.

One example of a program for self-determination is the *Beyond High School* self-determination intervention (Palmer, Wehmeyer, Shogren, Williams-Diehm, & Soukop, 2012). *Beyond High School* is a multi-component intervention designed to promote self-determination and involvement in education planning. In *Beyond High School*, students are taught how to self-direct planning and decision making regarding transition planning for post-high school. The second component is the Self-Determined Learning Model of Instruction (SDLMI). The purpose of SDLMI for this intervention was to teach students to self-direct goal setting, planning, and program implementation (Palmer et al., 2012). One difference between this study and others using SDLMI reported on below is that the second component included a student-directed person-centered planning meeting in which everyone involved with the student meets to refine goals and to provide support to the student during plan implementation (Palmer et al., 2012).

Results indicated that *Beyond High School* could be an effective self-determination intervention. Participants in the study were 18-21 year old students with intellectual disabilities. Significant increases from baseline to post- reports on the AIR Self-Determination Scale (Wolman et al., 1994).

Self-Determined Learning Model of Instruction

One intervention that has been examined for effectiveness in several studies is the Self-Determined Learning Model of Instruction (SDLMI) (Agran, Cavin, Wehmeyer & Palmer, 2006; Martin, Mithaug, Cox, Peterson, Van Dycke, & Cash, 2003; Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000). SDLMI has been investigated across multiple settings and with students with various disabilities. For example, one study (McGlashing-Johnson, Agran, Sitlington, & Cavin, 2003) examined SDLMI as a means to improve job performance for secondary students with severe cognitive disabilities, while another (Kelly & Shogren, 2013) examined the influence of SDLMI instruction on on-task behaviors for adolescents with emotional and behavioral disorders. Both studies will be elaborated on below.

The SDLMI is a model of teaching that focuses on self-directed learning and is based on the components of self-determination such as setting goals, developing plans to meet goals, and making appropriate adjustments to plans in order to meet established goals (Wehmeyer et al., 2000). SDLMI differs from many other self-determination interventions in that learning is self-directed by students (Wehmeyer et al., 2000). Students must self-regulate in order to identify the problem, potential solutions to the problem, barriers to solving the problem, and consequences of each solution (Wehmeyer et al., 2000).

McGlashing-Johnson et al. (2003) used SDLMI to teach student participants (4 secondary school age adolescents) correct responses in a task analysis for job placements. Specific to this intervention was self-monitoring for task completion. Results demonstrated that all four students improved from completing tasks from a range of 0% to 60% to a post-intervention completion rate of 46%-100% with three of the students averaging 80% or greater. Of interest, the three students who averaged 80% successful completion of tasks moved to the maintenance phase. Two of the students maintained an average of 80% while one student averaged 93% successful completion.

One study (Wehmeyer et al., 2000) examined the implementation of SDLMI and if the instructional strategy improved the self-determination of adolescent students with disabilities. Results indicated that the SDLMI intervention improved student's goal attainment (55% achieved or exceeded their goal) and increased locus of control (scores dropped from 15.8 prior to instruction to 14.1 post-instruction). Student self-reports

Agran, et al. (2006) examined the effects of SDLMI instruction on three adolescent students with moderate to severe disabilities on academic skills. Students were provided the opportunity to choose goals based on general education curriculum standards. All three students used goal setting, self-monitoring, and self-instruction in order to access the general education curriculum. All three students achieved mastery (i.e. 80% correct responding) in regards to chosen educational standards and two of the students demonstrated maintenance of the skills learned

during SDLMI instruction for two months and three and one-half months after the study concluded.

Kelly and Shogren (2013) conducted a single subject across student study of the effects of SDLMI instruction on on-task and off-task behaviors of adolescent students with emotional and behavioral disorders. Results indicated that all four students increased on-task behavior and decreased off-task behavior. In fact, two students the students had no overlap between baseline and intervention for both variables and the other students only had overlap of one data point for the off-task variable.

In a study based on SDLMI, Martin et al. (2003) implemented a plan, work, evaluate, and adjust intervention with a self-determination self-monitoring contract with elementary boys with emotional and behavioral disabilities in a residential facility. Results indicated that there was a decrease in student's inappropriate social and physical behavior after the implementation of the self-determination contracts, and improvement in self-regulation skills while completing academic tasks,

Three studies have conducted randomized trial experiments using SDLMI as an intervention (Lee et al., 2008; Wehmeyer et al., 2013; Wehmeyer et al., 2013). Lee et al (2008) conducted a pretest-posttest randomized trial control group design with 45 high school students with disabilities to determine the effects of SDLMI on specifically access to general education classroom. Students were instructed using SDLMI by trained special education teachers in setting educational goals, and developing an action plan. Students were then asked to complete the action plan in

the general education classroom. Results indicated that SDLMI did not have a statistically significant impact on enhancing student access to the general education classroom and curriculum. However, some of the reasons significance was not found may be due to variables such as lack of curriculum augmentation and not the intervention. Lee et al (2012) did find, however, that self-regulation improved, academic engagement improved, and problem behaviors decreased during the intervention,

Wehmeyer et al (2013) implemented a group-randomized modified equivalent control group time series design to ascertain if SDLMI increases self-determination for students with cognitive disabilities and, if so, does the same pattern emerge when the treatment is provided to the control group. Results indicated that there was significant improvement on the AIR Self-Determination Scale (Wolman et al., 1994) and the Self-Determination Scale (SDS) (Wehmeyer, 1996) during within-group analysis. While no significance was found between groups, the treatment group increased self-determination scores at a faster rate than the control group even though the control group started higher scores.

Finally, Wehmeyer et al. (2013) conducted a five-year longitudinal experimental study with adolescent students with intellectual or learning disabilities to provide multiple self-determination curriculums over a three year period in order to promote improved self-determination. Students were then given instruction with various published self-determination curriculums such as *The Self-Determined Learning Model of Instruction* (Wehmeyer et al. 2000).

Results revealed significance in the *AIR-S Self-Determination Rating Scales* (Wolman et al., 1994), significance for group effect, and significance for intervention group by time. Disability and gender did not add significant effects when added to the model, which suggests that the improved scores are due to the intervention (Wehmeyer et al., 2013). However, results on the *Arc Self-Determination Scale (SDS)* (Wehmeyer, 1996) did not replicate the results of the *AIR Scale.* Results for the SDS revealed significant changes for students with intellectual disabilities, but not for students with learning disabilities.

Current Study

This study will replicate a work intervention that includes the following steps: plan, work, evaluate, and adjust designed to improve self-determination skills (Martin et al., 2003). The replication will expand the research in several ways. The first is that Martin et al. (2003) conducted their study with 9 and 10 year old boys with emotional and behavioral disorders in a residential treatment facility, this study will be conducted with 9th and 10th grade male and female students with emotional and behavioral disorders in a public high school. Another difference will be the appearance of the self-monitoring reminder. This self-monitoring reminder will be adult-like in appearance rather than one geared for middle childhood.

A second difference is in the dependent measures. Martin et al. (2003) measured the percentage of agreement between plan and work, work and self-evaluation, self-evaluation and adjustment, and adjustment and work plan for the next day. This study will measure additional variables related to student success such as on-task behaviors, work completion, classroom disruptions, and grades.

Additionally, a qualitative component has been added to investigate how students perceived the intervention to affect their quality of life.

CHAPTER 3: METHODOLOGY

Introduction/ Overview

Overview

Research Questions

The purpose of this study was to examine a self-determination work intervention on academic engagement and the perceptions of perseverance and goal setting for students with emotional disabilities at risk of dropout.

1. Does a self-determination work intervention improve the academic engagement/performance of students with emotional disabilities' as measured by:
    a. percentage of work completion,
    b. time on task
    c. decreased redirections back to task?
2. To what extent does a self-determination work strategy influence students with emotional disabilities' self-perceptions of self-determined planning and goal setting?
3. Do the self-reported school experiences of students with emotional disabilities change as a result of a self-determination intervention?

Research Design and Framework

Design and Methodology

Site Selection

The setting for the study was a suburban high school located outside a major city in the northeastern United States. The school had approximately 2,000 students

and employed 100% highly qualified teachers under No Child Left Behind (2001). Of the 2,000 students, 18% were students with Individualized Education Plans. Another 3 % were students who are English Language Learners. The ethnic breakdown for the school was approximately 58% white, 14 % African-American, 10% Hispanic, and 17% Asian. Students who were from a low-income socioeconomic status comprised approximately 40% of the student body. The current graduation rate was approximately 90% within four years with student attendance averaging 92%. According to the Pennsylvania Department of Education (2013) the school had 58 (3%) dropouts during the 2011-2012 school year.

Design

A multiple baseline across teacher/content design was used for the intervention. The study was conducted for approximately twelve weeks as determined by the data. Multiple baseline across teacher/content was chosen because it provided the opportunity for generalization across classrooms and enabled the self-determination instruction to be delivered to all 10th and 11th grade students. In terms of order of implementation by content area, the intervention was first introduced in Science followed by English, Social Studies, and Mathematics. These classes were also taught by certified special education teachers who were highly qualified in the content area that they teach. The four teachers ranged from two to nine years experience in the emotional support program.

Participant Recruitment and Consent

Students

The participants were 10th and 11th grade students with emotional disabilities in receiving instructional emotional support classrooms in the district's high school. All participants were female. Participants included in the study met the criteria for Emotional Disturbance or Other Health Impairment for Attention Deficit Hyperactivity Disorder (ADHD) as set forth by Pennsylvania Chapter 14 regulations. Additionally, participants in the study received instruction in self-contained emotional support classrooms for content area subjects. Another inclusion criteria was the requirement that participating students attended school at least 80% of school days. Finally, inclusion in the study required parent consent and participant assent. Students who met criteria for Emotional Disturbance or Other Health Impairment, specifically ADHD and received instruction in the general education classroom for core content classes were excluded from the study.

All students in the self-contained emotional support classrooms received the intervention. The intervention was a change in practice in which no strategy currently existed for independent practice. The change to include a self-determination intervention during independent practice was the result of teachers seeking to increase the autonomy of students. Only students meeting the inclusion criteria and for whom consent and assent was received were included in data analysis. All others were excluded from data analysis. All participants had assented parental permission and had assented to participate in the intervention themselves.

Teachers

Four teachers who were providing instruction in the emotional support classrooms for each content area were recruited for participation in the study. Teachers freely volunteered with reassurance from the researcher that there would be no repercussions if they should decide not to participate or leave the study at any time. The researcher also served as the special education supervisor of the program. Teachers received an email detailing the option of opting out of the study without any potential negative repercussions for such a decision. Volunteer teachers assented to the email delineating their voluntary participation and that there would be no negative repercussions for opting out of the study. Teachers assented to participate in professional development sessions on Self-Determined Learning Model of Instruction and the Plan, Work, Evaluate, Adjust intervention, to implementing the intervention with fidelity, data collection, and a satisfaction survey following the intervention. The training was designed in order to familiarize the teachers with the background, the expectations for themselves as participants in the study, and to generate discussion in regards to how the student participation would be reinforced.

Procedures

Pre-Intervention

Step 1: Prior to beginning the study, the Self-Determination Learning Model of Instruction (SDLMI) was reviewed with teachers and instructional assistants in order to afford a clear understanding of the foundation of the Plan, Work, Evaluate, Adjust strategy (Martin et al., 2003). It is important for teachers and instructional

assistants to have a foundational understanding of the intervention since clarity is likely to lead to less confusion during implementation.

Step 2: A second session with the teachers was conducted to explain non-negotiable aspects of the study as well as to reach consensus regarding items that are negotiable. Implementation procedures specific to treatment fidelity was reviewed with teachers in order to control for teacher effects. Treatment fidelity components were non-negotiable (see attached Treatment fidelity checklist). Treatment fidelity items were not scripted affording teachers the opportunity to articulate the steps in their own words. However, completing each step was required and was part of the teacher training.

Regarding items that were negotiable, teachers were able to offer input and come to a collective decision. Once a collective decision was made, all teachers adhered to the decision. Teachers collectively were offered the opportunity to make decisions regarding whether students would be afforded the opportunity to earn points for accuracy during the intervention and how those points may contribute to reinforcement. Teachers decided how long the independent practice session lasted during a given lesson. Teachers had the opportunity to review the document (i.e. data collection sheet and self-determination contract) and offer suggestions for improvement of those documents.

The goal was for the intervention to be minimally invasive to the classroom instructional environment while simultaneously maintaining fidelity to the intervention. By offering teachers the opportunity to review the components of the intervention and offer input over certain elements of the intervention, it was

believed that there will be increased buy-in and the creation of materials that were appropriate for the participants. However, all teachers must adhere to final decisions. For example, if, during the meeting, teachers agreed to offer points for accuracy and provide reinforcement, all teachers would provide the same number of points and followed the established protocol for reinforcement.

Step 3: A brief data collection training session was provided for instructional assistants. Data collection sheets were reviewed and an inter-rater reliability session was conducted with each instructional assistant and the researcher. Booster sessions were to be provided for any reliability session that falls below 80%,. The researcher provided reliability checks randomly for the duration of the study. The purpose of the reliability checks was to ensure accuracy of data collection is maintained during the twelve weeks of the study.

Step 4: Teachers completed a Self-Determination Screening instrument (See Appendix D) for each student. Items from the Self-Determination Screening Instrument were taken from Wehmeyer et al.'s (2000) article on Self-Determined Learning Model of Instruction. The reason these items were selected was that the intervention used in this study was adapted from the Self-Determined Learning Model of Instruction.

Step 5: Each student participant was administered the AIR Self-Determination Scales (Wolman et al., 1994), and the Learning Climate Questionnaire (Williams & Deci, 1996). The option of oral administration was available to control for potential reading difficulties.

Preintervention Phase

During the implementation phase of the intervention, treatment integrity checks were conducted six times during the study in order to determine adherence to procedures established by the researcher and the teachers prior to initiating the intervention. A treatment integrity checklist is provided in Appendix A.

Introduction of the intervention strategy with the steps: plan, work, evaluate, adjust was provided through explicit instruction from the teacher along with modeling and two practice opportunities for participants with a self-determination contract. Teachers explained to participants that the intervention is designed to enable participants to control how they use their independent practice time. Teachers provided participants with a self-determination contract at the start of independent practice periods. The self-determination contract has four sections: plan, work, evaluate, and adjust. The self-determination contract (See Appendix E) allowed participants to determine when they will begin, what problems they will complete, and when their session ends. The teacher approved each plan and negotiated with participants who have either an excessively minimal plan or a work plan that is excessive in volume of work compared to the time for the work session.

Teachers provided guidance to any participant having difficulty with writing or time errors on the contract worksheet. Guidance was constructive. For example, a teacher may ask a student, “Is that realistic?” or “If this is all you plan on completing now, what is your plan for completing the rest of the problems?” If a participant did not begin within 5 minutes of the start of the independent practice

session, the teachers prompted the student to return to task by reminding the student to begin the task.

Participants worked until either they have met their stop time or the independent practice session is ended. Independent practice time ended five minutes prior to the end of the class to allow for a lesson closure activity. If finished prior to the end of class, participants engaged in individual activities established prior to the intervention with the classroom teacher such as computer time or additional activities agreed upon by the classroom teacher.

Plan

During the *plan* phase, participants: 1) indicated their individual start time, 2) wrote the number of problems or questions to be solved during independent practice, 3) indicated the number of problems or questions that would be correct and finally, 4)participants established an end time for the task. Participants provided a verbal rationale for their plan to their teachers. As noted earlier, plans that are minimal or excessive in proposed work to be completed by the participant were to be negotiated with the teacher in order to provide a challenge, but not overwhelm each participant.

Work

During the *work* phase, participants engaged in either independent practice or small group activities as per teacher assignment. Participants established the actual start time when they began working, actual problems or questions worked on, and gave the assignment to the teacher or instructional assistant for immediate

grading. Students then wrote the number of correct problems, the end time, and points earned if appropriate.

Evaluate and Adjust

Participants completed the *evaluate* and *adjust* sections based on information provided in the *plan* and *work* sections. Participants first evaluated their performance and then create and adjusted the plan if appropriate. If a participant completed his/her work, the participant indicated so by circling "yes" in the *evaluate* section of the contract. As a result, "no change" can be indicated in the *adjust* section of the self-determination contract. If the participant did not complete his/her work, the participant circled "no" in the *evaluate* section and indicated what adjustments they made for the next independent practice session in the *adjust* section of the self-determination contract. Choices for adjustment included starting at an earlier or later time, completing more or fewer problems or questions, or ending either earlier or later during the class time.

Interviews

At the conclusion of the intervention, all student participants completed the AIR Self-Determination Scale (Wolman et al., 1994). In addition, all four participants were interviewed one time by the researcher (See Appendix D for specific questions). Interviews took place after visual inspection of the intervention data and completion and analysis of the AIR Self-Determination Scale (Wolman et al., 1994).

The interview (see Appendix D) consisted of questions about the students' academic experiences prior to the intervention, their academic experiences during

and after the intervention, their perceived capacity for competence, autonomy, goal setting, and perceptions of willingness to persevere toward long-term goals. A brief teacher interview was conducted with regards to what was useful or not useful about the intervention , how the intervention worked, and what could be improved.

Confidentiality

Interviews for teachers and students was recorded on an iPad with recording app. The ipad had a locking code. The researcher was the only person who knew the code. Interviews for students were saved using letter of the Greek alphabet. Interviews for teachers were saved using French numerals. The reason for using the Greek alphabet was to add an additional layer of protection for the participants should someone access the ipad.

Baseline

Baseline data for work completion, redirections back to task, and percentage of time on task will be collected for two weeks prior to implementing the intervention. Data will be collected for work completion by identifying a baseline percentage of work completion by dividing the number of problems completed by the total number of problems. Redirections back to task were tallied as frequency data. Percentage of time on task was calculated using momentary time sampling. Independent work time was divided into five intervals of approximately four minutes for each interval. The instructional assistant observed each student during the interval and recorded if the student is on task or not at that moment. The data collection form is in Appendix B.

The reason these variables were chosen is that the variables are observable, measurable, and consistent with Reschly and Christenson's (2013) description of academic engagement. Proximal learning outcomes such as grades and performance on district assessments were reviewed as well as evidence of academic engagement. Baseline data continued to be collected for English, Social Studies, and Mathematics during the intervention phase in Science. Depending on data, the intervention will begin around week 5 for English, week 6 for Social Studies and week 7 for Mathematics. Baseline data was collected in each content area until the introduction of the intervention for each content area.

Maintenance

Data was collected for work completion, redirections, and percentage of time on task in each of the four content classrooms two weeks after the intervention concludes in order to determine if the skills learned had been maintained. was graphed with the existing graphs and visually inspected for sustainability.

Dependent Variables

Operational Definitions of Dependent Variables

- Work Completion- Work completion was defined as answering all assigned problems or tasks completely to include showing work if required with at least 80% accuracy.
- Redirections- Redirections was defined as any time a teacher or instructional assistant speaks to or uses proximity control in order to re-orient a student back to task.

- On-task- On-task was defined as attending to the speaker by looking at the speaker or performing a behavior that indicates the participant is on-task. Other behaviors considered "on-task" include raising hand to answer question, writing, using classroom and personal materials for the purpose of completing the task.
- Self-Determination- Self-determination was defined as the student's ability to set goals, take action, and adjust the goal or plan to attain a stated goal (Wehmeyer et al., 2000).

Rating Scales

For the AIR Self-Determination Rating Scale (Wolman et al., 1994), students completed the scale and the researcher will tally the scores onto the AIR Self-Determination Scale Form and follow the conversion scale from raw scores to a percentage of self-determination.

The Learning Climate Questionnaire (LCQ) (Williams & Deci, 1996)is determined by averaging the total scores for all questions. The LCQ is a Likert Scale with 1= strongly disagree to 7= strongly agree. The higher the score, the more autonomous the participant perceives the learning climate to be.

Intervention

Data for the dependent variable (academic achievement) for the Plan, Work, Evaluate, and Adjust strategy was frequency data for work completion, redirections back to task, and percentage of time on task. Instructional assistants as part of their

regular duties collected data. The data was collected and compiled on a table with each student's pseudonym on the left hand side of the page vertically (i.e. x-axis) and the dependent variables was listed across the top of the page. Data was collected during the independent practice part of the lesson. Work completion was scored as "yes" or "no." Redirections was tallied for frequency.

For on-task behavior, the independent practice section of the lesson was broken down into 9 one-minute equal one-minute intervals with each minute being broken down in four 15-second intervals. Each participant was observed once during each minute for a total of 9 data points during an observation. A three-minute interval took place during the beginning of independent practice, the middle of independent practice and the end of independent practice during intervention. Instructional assistants scored the behavior as +-for on-task and (-) for off-task. The data collection sheet allowed for data to be collected for individual participants as well as the entire class.

Interviews

With regards to the qualitative component, the researcher transcribed all interviews. Once the interviews were transcribed, the researcher established categories based in open coding followed by axial coding.

Instruments

Two rating scale devices were used. The AIR Self-Determination Assessment (Wolman, Campeau, DuBois, Mithaugh, & Stolarski. 1994) was administered to all student participants prior to the intervention part of the study. The American Institute developed the AIR Self-Determination Assessment for Research (AIR) with

Teacher's College of Columbia University. The Assessment includes a student, teacher, and parent version. Only the student version was used for this study. The student version measures a student's knowledge, ability, and perceptions about his/her perceived self-determination. There are thirty Likert Scale items on the student assessment. Scores range from "1" (never) to "5" (always) in the rating scale. The purpose of the AIR Self-Determination Scale is to measure perceptions of goal-setting and planning and is comprised of subscales titled "*Things I Do*," "*How I Feel*," *What Happens at School*," "*What Happens at Home*," and a three short answer questions related to goal setting and the planning associated with achieving the goal. The scale addresses capacity for goal setting and planning, home-school, opportunity for goal-setting and planning, knowledge of goal-setting and planning, ability to goal set and plan and perceptions of goal setting and planning.

According to Wolman et al (1994), the alternate item reliability ranged from .91-.98 and the split-half reliability rating correlated at .95. Test-retest reliability with 3 months elapsed time was .74.

For Validity, items 1-18 correlated from .68-.82 for capacity. Items 19-24 correlated positively from .59-.66 and items 25-30 negatively correlated from -.65--.68 for the second factor, home-school. Positive correlations from .40-.54 were noted for opportunity (items 19-30). Knowledge (Items 1-5) showed a weak positive correlation .22-.29. Weak negative correlations for ability for items 7-9 (-.25--.34) and for perception for items 13-15 (-.39) were noted.

The purpose for administering the AIR Self-Determination Scale (Wolman et al., 1994) was to gather a baseline for how students perceive their own self-

determination and to assess changes in self-determination goal setting and planning as a result of the intervention. As a result, the AIR Self-Determination Scale (Wolman et al., 1994) will be given prior to and following the intervention.

The Learning Climate Questionnaire (LCQ) was adapted from the Health Care Climate Questionnaire by Williams and Deci (1996). The LCQ contains self-report Likert Scale with 15 items designed to measure the social context that can influence motivation and performance of individuals within a particular learning environment. The Likert Scale items range from "1" (strongly disagree) to "7" (strongly agree). Alpha reliability ranges from .66 for a single factor to .96 for the scale (Williams & Deci, 1996).

The LCQ (Williams & Deci, 1996) was administered to determine how students perceive their current learning climate in regards to autonomy. One reason for giving students the LCQ was to assess their perceptions of their current learning environment. It is possible that the influence of the intervention can be mitigated or exacerbated by the learning environment.

Data Analysis

Multiple Baseline Design: Research Question #1

Data for work completion, redirections, and percentage of time on task was plotted and analyzed via visual inspection of graphs throughout the study. On-task behavior was the primary variable that will change the phase line. Conclusions regarding the intervention were drawn from patterns observed during visual inspection of the data. Data was visually inspected for level (average of data within a phase) and for trends (best fit straight line within a phase).

The slope of the trends was investigated for positive, flat or negative slant. The magnitude of the slant (slope) was examined for pitch (i.e. rapid or gradual change in the trend line.). Slope and magnitude were determined using least squares regression (Kennedy, 2005). Additionally, latency of change (period between termination of one condition and onset of the next) was inspected (Kazdin, 2003). Latency of change was inspected to determine intervention effect.

Data for the academic engagement dependent variables (i.e. work completion, redirections, and percentage of time on-task) was also measured using descriptive statistics for both individual students and for the collective class. For work completion, the percentage of work completed was assessed. Redirections were recorded as a frequency count and time on-task was measured by dividing the number of intervals when students were on-task by the total number of intervals.

Research Question #2

For the AIR Self-Determination Rating Scale (Wolman et al., 1994), scores were calculated for each subcategory (capacity, opportunity, knowledge, ability, and perceptions). Data was then analyzed across scales to examine for potential changes within the participant's self-report. Data was recorded on a scatter plot to determine if changes exist for each student for each category of the AIR Self-Determination Rating Scale (Wolman et al., 1994).

Research Question #3

With regards to the interviews, themes were established during axial coding and participant responses were coded accordingly. Initial categories included student academic experiences, capacity for self-determination, perceived

competence, autonomy, ability to goal set, and self-reported perseverance toward long-term goals. Data from themes would then be compared with participant responses to the AIR Self-Determination Rating Scale.

Role of Researcher

The researcher serves as the special education supervisor for the high school. This is the researcher's fourth year as a high school supervisor of the learning and emotional support programs and his fifth year employed by the school district. The researcher attends a range of approximately 20-35 Individual Education Plan (IEP) meetings per week and works very closely with teacher-case managers who are the first line of intervention for students with disabilities.

Having worked closely with teacher-case managers who work very closely with students with disabilities, the researcher began to see patterns of students with high incidence disabilities such as emotional disturbance either not completing school or struggling to move from a self-contained learning environment to a general education setting despite extensive interventions that included implementation of counseling services, revised functional behavior assessments, and revisions to existing behavior support plans.

Students were discouraged and disengaged from school, and had significant stressors outside of school such as living in poverty, caring for family members, late identification for special education services (i.e. identification in ninth or tenth grade) and drug experimentation. Additionally, students had experienced significant stressors in school such as grade retention, chronic failure, frequent discipline referrals, and an inability to form close relations with adults in the

building. Many have left school and not returned. There is a vested interest for this researcher in identifying strategies that will facilitate the building of a pattern of success for such students.

The researcher provided all consultation/ training sessions as well as any booster sessions needed. Teachers volunteered and were provided in writing that their participation was voluntary and under no circumstances would their participation or lack of participation in the study in any way impact their performance evaluations.

Issues of Validity

Quantitative

Internal Validity

One threat to internal validity is the possibility that the teacher or the content could influence the performance of a student or students or a teacher may not implement the intervention properly. For example, a student may prefer social studies or Ms. X and may perform at a higher level than in other content areas with different teachers. Several protections have been built into the study to identify and minimize the threat. The multiple baseline design will provide data both at the class and individual level. In addition, treatment fidelity checks were conducted in order to ensure appropriate delivery of the intervention. If a student has a preference for a content area or teacher, the student's individual data should capture that bias. Treatment fidelity checks enabled the researcher to ensure adherence to the intervention. Additionally, the inter-rater reliability checks for data collection with

the instructional assistantsshould guard against data collection outside the scope of the operational definitions of the dependent variables.

One additional threat to internal validity is the fact that the researcher works with the teachers and students in a supervisory capacity. The researcher provided the teachers with a written statement that their participation is voluntary. The researcher also used triangulation methods described below if reactivity effect becomes an issue with participants since it is possible that participants may respond differently based on their relationship with the researcher.

Several rating scales were used during this study. Those rating scales will be administered before and after the intervention, but will not be used to determine difference based on the intervention. In addition, students were interviewed in regards to components of the rating scales in order to validate any changes that may be observed in the before and after conditions.

External Validity

One threat to external validity is that participants are in self-contained emotional support classes. It is possible that the results of the intervention may not extend beyond the self-contained classroom or into self-contained learning support classrooms. The length of the study (12 weeks) should control for novelty effects since the "newness of the study" ought be mitigated over time.

Construct Validity

One potential threat to construct validity is the researcher's role within the school district as a high school special education supervisor. Many of the participant's know the researcher in his professional role. If the participant's

connect the researcher to the study, this may impact participant performance in either a positive (e.g. trying very hard) or negative (e.g. not trying at all) direction. As a result, the researcher must keep a distance from the intervention during implementation. In other words, the researcher cannot be connected to the study during implementation. Additionally, the single subject research design by individual participant ought control for effects that may indicate if a participant is skewing the data. Invariably, results will be reported with attention as a consideration for potential interpretations if warranted.

In terms of unintentional expectancy effects and cues related to the experimental situation (Kazdin, 2003), the researcher will not be involved in any direct aspects of the intervention with the exception of conducting treatment fidelity checks. As a result, neither is considered a potential threat to the intervention.

Other potential threats to construct validity include unreliable measures, low statistical power, and variability of procedures (Kazdin, 2003). Measures have been taken within the design to guard against such threats. All rating scales have reported reliability and validity. The single subject design was chosen to guard against low statistical power and treatment fidelity checks with guard against variability of procedures.

Triangulation

In an effort to authenticate interview responses, data from interviews will be triangulated with data from other parts of the study. Triangulating student and teacher interviews, data collection regarding work completion, percentage of time

on task and redirections, rating scales will be reviewed for evidence confirming themes that emerge through validated data analysis (Creswell, 2007). Further, transcriptions were provided to each participant for member checking to determine accuracy of the transcription (Stake, 2010).

CHAPTER 4: RESULTS

Data was collected for this study from late February until early June. The initial baseline data collection was taken daily for the first two weeks and then three times per week after the initial two weeks. Data was entered and analyzed to answer the following research questions at least one time per week. The researcher either collected the data at the end of a school day or an instructional assistant delivered the data and entered within two days.

Research Question #1: Does a self-determination work intervention improve the academic engagement/performance of students with emotional disabilities?

On-Task Behaviors

Appendices M, N. O, P display the on-task data for all four participants. A table of all participant on-task percentages can be seen in Appendix BB. Amelia's on-task behavior means increased in 3 of the 4 classes. In Science, she improved from 62.27% (Range 100-33%) to 70.58% (Range 88-20%) from baseline to intervention. In English, she improved from 76.16% (Range100-0) to 78.67% (100-45) from baseline to intervention. On-task behavior improved in Social Studies from 92.04% (Range 100-55) to 94% (100-88) from baseline to intervention. The mean decreased in Math from 70% (Range 100-0) to 67% (Range 100-0) from baseline to intervention. Median scores for on-task behavior for Amelia decreased during the intervention for 3 of the 4 classes (i.e. English 88% during baseline to 77% during intervention, 100% to 77% for Social Studies and 77% to 67%for Math.). The median score in Science increased 10 percentage points from 67% to 77%. A table of all participant median scores can be seen in Appendix CC.

Amelia also demonstrated a higher percentage of days exceeding 80% on-task behaviors in 3 of 4 classes (Social Studies from 28/30 (93%) to 4/4 (100%) (An increase of 7%); Science from 1/11 (9%) to 4 of 17 (24%) (an increase of 15%); Math from 7 of 22 (32%) to 2 of 3 (66.7%)days (an increase of 34.7%)). Only English decreased from 12/15 (80%) days to 3 of 9 (33%) days. A table with all participant percentage of days above 80% on-task can be seen in Appendix EE.

Claudia's mean on-task behavior increased in two classes (English from 55.2% [Range 100-0%] to 60.9% [Range 100-22%] and Math from 30.1% [100-0%] to 67% [Range 100-0%]) and decreased in two classes (Science from 50.1% [Range 100-0%] to 37.7% [Range 100-22%] and Social Studies from 67% [Range 100-0%] to 27.5% [Range 50-0]). Median percentage scores increased or remained the same for 3 of 4 classes. Claudia's percentage score for Science remained at 44% for both conditions, increased from 55% to 61% in English and from 22% to 100% in Math. Claudia's percentage score decreased in Social Studies from 67% to 44%.

Regarding days above 80% on-task, Claudia improved during intervention for 2 classes. In English, she attended to instruction above 80% in 3 of 23 days (13%) during baseline, and 2 of 7 (29%) during the intervention. (16% increase from baseline) In Math, she was above 80% on-task for 3 of 21 (14.3%) days during baseline and 2 of 3 (66.7%) for Math (an increase of 52.4%) during intervention. However, her on-task behavior also decreased in two classes. In Science, she attended above 80% for 4/12 days (33%) during baseline and 1/17 (6%) for the intervention (a 27% decrease) and in Social Studies was above 80% for 9 of 28

(32%) days during baseline, but 0 of 5 (0%) days during intervention a decrease of 32%).

Corinna was not in attendance during the Math intervention phase. Corinna improved from baseline to intervention in Social Studies class only increasing percentage of time on task from 72.4% (Range 100-0%) to 75.2% (Range 100-22%). Science and English decreased from 73.13% (Range 100-22%) to 56.07% (Range 100-22%) and 69.1% (Range 100-71%) to 58.75% (Range100-22%). Her median scores decreased across all 3 content areas (Science from 77 to 49.5; English from 77 to 55.5; Social Studies from 88 to 77).

Regarding days above 80% on-task behavior Corinna scored above 80% for 4 of 18 (22%) days during baseline and 2 of 14 (14%)days in Science representing a decrease of 8%; 8 of 19 days (42%) during baseline in English and 2 of 8 (25%) days during intervention representing a decrease of 17%; and 15 of 28 (54%) days in Social Studies during baseline and 1 of 5 (20%) during intervention representing a decrease of 34%.

April's on-task behavior increased during three of four classes. She improved from 55.2% (Range 100-22%) during baseline to 56.8% (Range 100-22%) during intervention in Science, from 61.25% (Range 100-33%) in English during baseline to 68.7% (Range 100-44%) during intervention, and 51.73% (Range 100-0%) during baseline to 88.67% (Range 100-67%) during intervention for Math. April decreased from 76.7% (Range 100-0%) during baseline to 24.75% (Range 55-0%_during intervention in Social Studies.

Median scores also increased for three of four classes. For Science, the median percentage on-task was 44% during baseline and 67% during intervention. For English, April's on-task behavior improved from 55% during baseline to 67% during intervention. For Math, on-task behavior improved from 67% of the time to 100% during intervention. In Social Studies, there was a decrease from 88% during baseline to 22% during intervention.

Regarding days above 80% on-task, April achieved that standard 3 of 10 (30%) days in baseline and 4 of 17 (24%) during intervention representing a decrease of 24%. She was above 80% on-task for 3 of 20 (15%) days during baseline and 2 of 7 (29%) days during intervention demonstrating an increase of 14%, 18 of 32 (56%) days during baseline for Social Studies and 0 of 5 (0%) days during intervention representing a decrease of 56%). Finally, April was above 80% on-task for 5 of 18 (28%) days during baseline and 2 of 3 (67%) days during intervention demonstrating an increase of 39%.

Work Completion

A table of all work completion percentage means can be seen in Table 5 (Appendix FF). A table for Median Work Completion Mean Percentage can be found in Table 6 (Appendix GG). The range of average work completion can be found in Table 7 (Appendix HH). Amelia's work completion percentage increased in two of four classes and remained at 100% (Range 0% for baseline and intervention) during both conditions for Social Studies. Amelia's work completion increased from a mean of 83.6% (Range 100-50%) during baseline to 91.9% (Range 100-50%) during intervention for Science. Work completion also increased in Math from a mean of

80.2% (Range 100-0%) during baseline to 100% (Range 0%) during intervention. There was a slight decrease from 100% (Range 0%) during baseline to 97.9% (Range 100-81%) during intervention for English. Median scores remained the same for English, Social Studies, and Math at 100% for both conditions and improved from 95% during baseline to 100% during intervention for Science.

Regarding days completing above 80% of her work, Amelia achieved that goal for 7 of 11 (64%) baseline days and 16 of 18 (89%) intervention days for Science representing an increase of 25%. For Math, she improved from 24 of 32 (75%) days to 3 of 3 (100%). She completed 100% of her work for Social Studies in both baseline and intervention conditions. Amelia scored above 80% work completion for all 19 (100%) days during baseline for English and 8 of 9 (89%) days for the intervention.

Claudia's work completion percentage increased for three of four classes. She increased her work completion percentage in Science (69.6% baseline to 74.7% intervention [Range 100-50% for both conditions]), English (89.2% [Range 100-25%] during baseline to 96.9% [Range 100-78%] during intervention), and Math (29.6% [Range 100-0%] baseline to 100% [Range 0%] intervention). Work completion decreased from 72.2% (Range 100-0%) during baseline to 40% (Range 100-0%) during intervention for Social Studies. Median scores increased or remained the same for three of four classes. The median remained the same for English at 100% for both conditions and increased for Science from 95% to 100% and for Math from 0% to 100%.

Days above 80% work completion for Science were 7 of 11 (64%)days during baseline to 16 of 18 (89%) days during intervention representing a 25% increase. For English, Claudia was above 80% for 14/15 (93%) baseline days and 6 of 8 (75%) intervention days demonstrating a decrease of 18%. For Social studies, she had completed 80% of her work for 15 of 25 days (60%) during baseline and 1 of 5 (20%) days during intervention representing a decrease of 40%. For Math, Claudia met or exceeded 80% work completion for 8 of 27 (30%) days during baseline and for 3 of 3 (100%) days during intervention representing an increase of 70%.

Corinna improved on her work completion in two of three classes (She was not present for the Math intervention). For Science, she increased from 74.7% (Range 100-0%) work completion during baseline to 83.3% (Range 100-0%) during intervention. For Social Studies, her work completion percentage increased from 94.5% (Range 100-60%) during baseline to 100% (Range 0%) during intervention. Her work completion percentage decreased from 96.7% (Range 100-50%) during baseline to 83.5% (Range 100-0%) during intervention for English. Median scores remained the same for two content areas. Both English and Social Studies remained at 100% for both conditions. The median score for Science increased from 75% to 100% during the intervention.

Days above 80% work completion percentage for Science were 7 of 9 (78%) for baseline and 10 of 13 (77%) days for the intervention for a decrease of 1%. For English, 14 of 15 (93%) days were at or above 80% work completion during baseline and 6 of 8 (75%) during the intervention representing a decrease of 18%.

For Social Studies 15 of 19 (79%) days during baseline were at or above 80% for work completion and 5 of 5 (100%) during intervention were at or above 80% for work completion for an increase of 21%.

April improved in two of four content areas for work completion. In Science, April completed 66.7% (Range 100-0%) her work during baseline and 94.4% (Range 100-75%) of her work during the intervention. In Math, April improved from 54.6% (Range 100-0%) work completion during baseline to 100% (Range 0%) work completion during the intervention. There was a slight decrease in English from 100% (Range 0%) work completion during baseline to 89.3% (Range 100-50%) during intervention. There was a decrease in Social Studies work completion from 91.9% (Range 100-0%) during baseline to 50% (Range 100-0%)during intervention. The median work completion percentage for Math increased from 62.5% (Range 100-0%) during baseline to 100% (Range 0%) during intervention.

The median remained the same for Science and English. There was a median of 100% work completion for each class for both baseline and intervention. There was a decrease from 100% mean work completion during baseline to 50% mean work completion during intervention. April's percentage of work completion percentage decreased for three of four classes. The difference of range of work completion decreased for Math from 100% (100 max – 0 min) during baseline to 0% (100% work completed) during intervention; for Science from 100% during baseline (100 max – 0 min) to 25% (100 max – 75 min) during intervention and from 100% (100 max – 0 min) during baseline to 50% (100 max – 50 min) for English during the intervention.

In terms of days above 80% work completion, April completed 80% or more of her work for 7/12 (58%) days during baseline and 13 of 16 (81%) days during intervention for Science for an increase of 23%. She completed 80% or more of her work for 14 of 14 (100%) days during baseline for English and 5 of 7 (71%) days during intervention for a decrease of 29%. For Social Studies, April completed at least 80% of her work for 21/25 (84%) days during baseline and 2 of 4 (50%) for the intervention representing a decrease of 30%. For Math, 80% or more work was completed on 13/28 (46%) days during baseline and 3 of 3 (100%) days for the intervention for an increase of 54%.

Redirections

Appendix JJ provides the reader with a table showing all average redirections for each participant. Because there were so few redirections given, range calculated. The average number of redirections for Amelia decreased in two of four classes. Science decreased from an average of 0.29 redirections per class during baseline to 0.28 redirections during intervention. Social Studies decreased from 0.24 during baseline to 0 during intervention. Redirections remained the same at 0 for English in both conditions and increased in Math from 0.37 during baseline to 0.67 during intervention.

Claudia received on average fewer redirections in two classes. Redirections decreased from an average of 0.5 redirections per class during baseline to 0 during the intervention for English For Math, Claudia was redirected an average of 1.41 times per class during baseline. That level dropped to 0.33 redirections per class during intervention. In Science, there was an increase from 1.21 redirections per

class during baseline to 1.28 redirections per class during intervention. In Social Studies, there was an increase from 2.1 redirections per class during baseline to 2.8 redirections during intervention.

For Corinna, there was a decrease in redirections per class for two classes. For English, Corinna was redirected 0.19 times per class during baseline and 0.11 times during intervention. In Social Studies, there was a decrease in redirections from 0.95 per class during baseline to 0.6 times per class during intervention. The was an increase in redirections from 0.35 times per class during baseline to 0.41 times per class during intervention for Science. Data was only able to be collected during the baseline condition during Math for this student.

Redirections also decreased in two classes for April. In English, there was a redirection one time every 10 days day during baseline and 0 during intervention. For Math, the decrease was from 0.76 redirections per class during baseline to 0 redirections during intervention. Increases in redirections were observed in two classes. In Science, the increase was from 0.54 redirections per day during baseline to 0.67 redirections per day during intervention. In Social Studies, the increase was from 1.48 redirections per day during baseline to 2.25 redirections per day during the intervention.

1. *Research Question #1: Does a self-determination work intervention improve the academic engagement/performance of students with emotional disabilities' as measured by: a) percentage of work completion, b) time on task, and c) decreased redirections back to task?*

The first research question for this study addressed whether or not the *Plan, Work Evaluate, Adjust* intervention would have an impact on students' on-task behaviors, work completion, and number of times redirected back to task. Results were mixed with trends toward the intervention having a positive impact.

Regarding on-task behavior all four students demonstrated improvement in at least one class with two showing improved on-task behavior in three classes on on-task behavior. Examination of the data revealed that the same mixed pattern exists for median scores, range scores, and days above 80%. Despite the mixed results, trends tended toward the intervention having a positive impact. For example, regarding the student who only improved in one class for on-task behavior, the difference in range of scores was reduced in two classes (English and Social Studies) with the minimum scores increasing from 11% to 22% in English and 0% to 45% in Social Studies.

Regarding work completion and redirection, the same mixed pattern emerged for all four participants. Data tended to reveal progress in one or two classes, but some regression in others. In some cases, there was not much room for improvement. For example, Amelia completed 100% of her work during the baseline and the intervention conditions.

Anecdotally, there were changes in the independent practice part of the lessons. Within five data points of the starting the intervention, the Science teacher approached me and informed me that he had extended the time allowed for independent practice from approximately 5 minutes per lesson to 15 minutes per lesson. Further, the Science teacher later stated that he had been able to increase

the number of problems/ questions for students to complete from 3-5 to 15-20. He was using the exact same content as the general education teachers. The English and Science teacher both remarked at how much more quickly students began work with the self-monitoring sheet. One of the instructional assistants commented on one particular participant and how much more focused she had been since the intervention started.

You want to include here any anecdotal or qualitative data on this question, statements teachers made or students relative to this question.

Research Question #2: To what extent does a self-determination strategy influence students' self-perception of her own planning and goal-setting?

The question is about the students' self perceptions so start with what they said then go to the teachers or preface the teacher data at the beginning with why it is relevant, I'd encourage you to put the students data first then the teachers

Results of the AIR Self-Determination Scale (Wolman et al., 1994) for each participant yielded increases in self-perceived self-determination for three of the four participants overall and for all four participants specific to self-determination related to school. Amelia's self-determination increased from a pre-intervention level of self-determination score of 70% to post-intervention score of 75% (Raw score increase from 84-90) with a four -point increase (25 pre; 29 post) specific to school and a 5-point increase specific to what happens at home (23-28). The highest post-score for Amelia was "What Happens at School."

For Claudia, her pre-intervention level of self-determination self-perception score was 65%. Post-intervention, her score increased to 70%. Modest gains were

noted in all four sections of the AIR Self-Determination Scale, Wolman et al, 1994). For "What Happens in School," the raw score increased from 18 during pre-intervention to 20 during post-intervention. Claudia's highest score was a 23 under "How I Feel."

Corinna remained at 55% post-intervention. However, her self-perception score improved from a 15 to a 17 post-intervention. Her highest raw score post-intervention was "Things I Do" at 22.

April's self-perception increased from 60% pre-intervention to 68% post-intervention. She reported increases in three of four areas including a four-point gain in "What Happens at School (from 19 pre-intervention to 23 post-intervention and from 18 in "How I Feel" pre-intervention to 29 post-intervention. The 11-point increase was the largest among the four participants in each section of the Scale.

Prior to the beginning of the intervention, three of the four classroom teachers rated the students on how they perceived each of the participants in relation to self-determination based on standards established by the Self-Determination Learning Model of Instruction (Wehmeyer et al, 2000) (See Appendix C). One teacher did not respond to reminders. The purpose was to determine if the teachers perceived high self-determination related to the intervention in the participants prior to implementing the intervention.

The scale was given pre-intervention only as a means of determining if the teachers saw the participants as self-determined. The scale was derived using components specifically identified by Wehmeyer et al, (2000) specific to the Self-Determination Learning Model of Instruction. A 4-point Likert Scale was

constructed to have teachers assess how frequently a participant exhibited the given behavior/ skill. The Likert Scale was comprised of the following: 1- Never. 2- Sometimes, 3-Often, and 4- Always. Good explanation

The Science, English, and Math teachers all returned the rating scale. Amelia received a total of 3 "Always" (From Science teacher), 14 "Often," and 12 "Some." The average score for each teacher was a 1.0 for "Always," 4.7 for "Often," and a 4.0 for "Some." Two teachers (English and Science) had scores of 5 for "Often" and 5 for "Some." All three teachers agreed upon only one item. That item was "Student can prioritize needs or work to be completed." The rating was "often."

Claudia's total scores were 4 for "Often" (All from Math teacher), 6 for "Some," and 20 for "Rarely." "Often" averaged a 1.3. "Some" averaged a 2.0, and "Rarely" averaged a 6.7. Two teachers (Science and English) reported 8 for "Rarely" and 2 for "Some." There was 100% agreement on three items as "Rarely." Those items were: 1) Student can prioritize needs or work to be done. 2) Student can develop a schedule and follow an action plan to achieve a goal and 3) Student can monitor progress by self.

Corrina's teacher ratings demonstrated consistency between her Science and English teacher with 8 "Oftens" and 2 "Somes" for Science and 7 "Oftens" and 3 "Somes" for English. Her Math teacher reported 9 "Always" and 1 "Often." There were no agreements across all three teachers. Scores averaged across all three teachers were 3.0 for "Always;" 5.3 for "Often," and 1.67 for "Some."

For April, all three teachers reported disparate scores. The Science teacher scored 3 "Often" and 7 "Some. The Math teacher scored 3 "Some" and 7 "Rarely" and

the English teacher scored 3 "Often," 4 for "Some, " and 3 for "Rarely. Scores averaged a 2.0 for "Often," a 4.67 for "Some," and a 3.3 for "Rarely." There was 100% agreement on two items rated as "Some." Those items were: 1) Student can state a goal and identify criteria for achieving the goal and 2) Student can develop a plan of action t get from current status to identified goal status.

The post assessment revealed that three of the four students improved in their perceptions of their own self-determination. In particular, three of the four students also reported increased self-determination in "What Happens at School." Increases were modest with gains mostly around 5% within a short intervention timeframe. In general, the teachers' results were somewhat inconsistent, but as a whole revealed that the teachers perceived the students as less self-determined than the students saw themselves prior to the intervention.

Research Question #3: Do the self-reported school experiences of students with emotional disabilities change as a result of a self-determination intervention?

Changes in School Experiences

Regarding whether or not participants felt more confident and independent after the intervention, all four participants agreed that there was benefit to the intervention that contributed to their confidence and independence with schoolwork. For example, Amelia stated, "I would have been working, but then the bell would ring and I would be like 'Oh, that's the bell and I only did this much (X6, pg 176).' The more I keep time in mind, the more I get done (X9, pg 176). " Claudia stated that prior to the intervention, "I never really did the assignments, but after this I started doing them because I really knew what I had to do and it was right in

front of me (AA1, pg 182)" Corinna stated, "Before I was rushing through stuff, but now I was reading the questions thoroughly and actually answered it (Y10, pg 178)." Finally, April stated, "It's easier for me because once I'm instructed on what I need to do, I do it myself (Z5, pg 180)."

Amelia states that prior to the intervention, she did no planning. Claudia stated that prior to the intervention, "I used to sleep all the time, but now I don't. Now I made a goal. I planned it out. I did the steps to it and followed the steps. I achieved the goal I wanted (AA16, pg. 182)." Corinna discussed missing honor roll and struggling with Biology before the intervention, but was currently getting all A's and B's. When asked what was different, she replied that the intervention helped her communicate with teachers (Y18, pg. 178). She was able and more willing to ask for help. April stated that she 'sort of" set goals, but "never wrote them down Z8, pg. 180)." Further, " I would set goals for myself and it was better for me to write them down so that helped me (Z8, pg. 180)."

Regarding potential perceptions of attitude change toward schoolwork, all four participants stated that they had a more positive attitude toward schoolwork during the intervention. Both Amelia and Corinna stated that before the intervention, schoolwork was "boring" and that they completed it out of a sense of obligation. For example, Corinna stated, "…I did it because I had to do it. (Y22, pg. 179)." However, both participants stated that the intervention made schoolwork "kind of like a game." Amelia followed that statement by adding, "You want to get as much done as you can (X12, pg. 176)." Corinna stated, "…you want to beat what you did (Y23, pg. 179)." Claudia was more specific. She stated, "I hate schoolwork. Now

I still dislike it, but it gives me purpose to see I'm improving (AA19, pg. 179)." Finally April indicated that she was fine with schoolwork prior to the intervention, but benefitted from having the self-monitoring intervention direct her to the time limitations. She stated, "I have to finish before a certain time. I found it easier to accomplish. I like going a little above my goal. I was exceeding my goal. If I was meeting it, I was exceeding it (Z13, pg.180). "

Three students (Amelia, Corinna, and April) stated they did some sense of planning outside of school. Amelia provided an example of picking up sticks before mowing the lawn (X15, pg. 176). Corinna discussed a goal about spending more time with her family and April merely stated that she "plans stuff out, before wrote anything down (Z19, pg. 178)." Claudia indicated that she was not able to plan out. However, with the self-monitoring tool provided for her, "I can do that, but to plan out my life? No (AA27, pg. 182)."

All four participants stated that they had experienced improved performance during the intervention. Amelia stated that the intervention, "…made me actually want to do my work (X17, pg. 176)." Claudia noted that "I complete more of the work. I'm more focused than I was. I used to get very sidetracked, but now not so much (AA29, pg. 182)." Corinna stated that she had previously always missed honor roll, but, "When we started this, I got proficient honors. Got all A's and B's. I am hoping to get proficient honors again this marking period (y29, pg. 178)." Finally, April noted that she was able to "finish work on time and faster (Z20, pg. 180)."

All four participants stated that they saw benefit to the strategy. Amelia remarked, "It kept me mindful. Yes, the more you are mindful about things, the

more success you can have (Y22, pg.176)." Claudia noted the importance of having the visual aide as a reminder. She stated, "Because when a teacher tells you what to do verbally, you're just like 'okay I don't want to listen,' but when they put the paper in front of your face, what you have to do instead of trying to figure out what you have to do (AA37, pg. 183)." More specifically, Claudia stated, "I'm less all over the place, more focused and centered AA45, pg. 183)." Corinna mentioned that the planning phase made doing schoolwork, "… kind of like a game for me, but it's work. It's a game to me. I like that kind of competition Y34, pg. 179)."

Finally all four participants indicated a willingness to continue using the strategy. Amelia claimed she would want to continue to use the strategy because, "…I'm big with visual reminders (Y23, pg 176)." Claudia continued with her theme that the intervention helped her focus. She stated, "My whole problem is focus and this helps me focus on one question at a time, not looking at the phone or my nails. I'm focused on one thing (AA58, pg. 183)." Corinna stated that the intervention helped her "improve my grades and helped me communicate with teachers because I read the questions more carefully. I participate in class now (Y44, pg. 179)." She also stated that she expected a return to B's and C's if the intervention was discontinued. April stated that she would continue to use the strategy if it was provided for her (Z31, pg. 181).

Overall, all four participants saw benefit to the intervention. One participant stated that she made honor roll for the first time when the intervention was introduced. Another stated that she found herself more focused and able to complete work in class. Collectively, participants seemed to support the

intervention and described their own behaviors in a manner consistent with increased student engagement. For example, one participant discussed her increased focus, two students reported improved grades, and another stated that the intervention made independent practice like a game. Finally, all four participants did either request or support the notion of continuing to use the strategy after the research study was completed.

Treatment Fidelity

Treatment fidelity checks were provided 7 times through the intervention. Each teacher was observed at least one time. Treatments fidelity checks yielded the following: 100%, 100%, 80%, 67%, 100%, 100%, and 88%. There was one very brief booster session for the English teacher following the 67% rating. Subsequent treatment fidelity check yielded 100% fidelity.

Inter-rater Reliability

There were 5 inter-rater reliability checks conducted. Inter-rater reliability agreements were as follows: 97%, 96.3%, 87%, 93%, and 97%. The last three scores were obtained with only the Science/ English and Social Studies instructional assistants. The instructional assistant for Math did not attend the final three sessions despite reminders.

Social Validity/ Teacher Interviews

Three of the four teachers responded to the request for a brief interview though all four provided consent to participate. The three teachers who responded were the Science, English, and Math teachers. The Social Studies teacher did not respond to requests to participate at the time for conducting the brief interview.

Teachers were first asked how the intervention worked for their students. The Math teacher noted that the students were "100% on-board and participated wholeheartedly." However, the intervention was introduced at the end of the school year and reduced their effort. The English teacher noted that the intervention "worked well by helping the students to self-monitor their work in class and build their confidence in the amount of work they are able to complete in a class period. The Science teacher noted specifically that students were able to complete "1.5 to double the amount of independent work" and completed it "100-150% faster." He also reported expanding the amount of time students had for independent practice from 5 to 15 minutes per class within one week of having taught the intervention.

Strengths of the intervention were identified as "self-monitoring, confidence building and good source of data collection" from the English teacher. The Math teacher reported "it held the students more accountable, and gave them a reason to work hard by "forcing" them to be accountable for their work/actions." The Science teacher reported that the intervention "didn't take long" to implement and that it could be done "every day."

Weaknesses reported included from the Math teacher, "by the end (of the school year), some students did not take the whole process entirely seriously." Such behavior may have had more to do with the timing of the intervention than the intervention itself. The English teacher reported that, "students were not always honest and some forgot to fill out the sheets regularly." The Science teacher cited that the intervention was a "foreign object inserted into the classroom," that the intervention was "hard to manage with such a large ES (emotional support) class

size," and might have been better if the intervention had been started earlier in the year.

Regarding what might have been done differently, the Science teacher stated that he would have, "Started in the beginning of the year with a smaller class size (the class ranged between 17-19 students)." The English teacher remarked that a longer period of data collection would have been beneficial. The Math teacher concurred with the English teacher stating," I would have liked to have this process started well before the end of the year."

All three teachers found value in the self-monitoring component of the intervention. The Science teacher believed that if the class were around 10 students, the intervention would have been "smoother, quicker, more efficient." The Math teacher stated that she intended to implement the intervention on her own during the next school year. Finally the English teacher stated, "Yes! I think they are crucial for our students to begin to monitor themselves and become more independent for their future."

Finally, regarding student benefit, the English teacher stated, "They will need this skills as they further their educations and enter the work force! The Math teacher reported "I feel like it holds them more accountable and makes them feel more challenged with completing work, etc." The Science teacher stated that one benefit was students " had a sense of accomplishing something at the end." He added that students really focused on the components of the sheet and sought to meet that goal and "it almost became like a race for the students."

Summary

Regarding if the intervention improved percentage of work completion, time on task, and decreased the number of redirections from the teacher or instructional assistant, results were generally mixed. All students showed some progress in some areas and regression in others. The impact of the intervention may have been masked by ceiling effects. For example, Amelia completed 100% of her work in the baseline condition for both English and Social Studies. There was simply no room for progress. However, Amelia did demonstrate improvement in content areas where there was some room for improvement. For example, in the baseline condition, she completed 83.6% of her work. That improved to 91.9% during the intervention. Similar patterns emerged for Corinna and April, who both demonstrated ceiling effects in the baseline condition.

Claudia did not demonstrate ceiling effects and demonstrated some interesting results. Her on-task behavior in Science decreased (50.09% baseline to 37.65% intervention), but her work completion increased (69.6% baseline to 74.7% intervention). She did demonstrate a significant drop in work completion in Social Studies (72.2% in baseline to 40% during intervention), but that drop was consistent with her on-task behavior (67% during baseline to 27.5% during intervention). Overall, the participants tended to improve in two or three content areas per variable and regress in one or two content areas. Consequently, trends may indicate a positive effect, but the data at the discontinuation of the study (end of school year) exhibits mixed results.

Three of the four participants showed gains in their perception of their own

self-determination after the study with one participant remaining consistent. Interestingly, teachers were asked to rate the students self-determination based on the Self-Determination Learning Model of Instruction and, despite very little agreement, tended to rate the participants as less self-determined than the participants. There were few intervention points in two of the content areas (Social Studies and Math). These few points may have masked changes in perceptions of self-determination. Excellent job on this - Also it is a short intervention to have any impact in such a global variable so that is amazing in some ways

All four participants reported changes in themselves as students when comparing the intervention to the baseline condition. Amelia, who demonstrated ceiling effects for on-task behavior, work completion, and redirections in some content area classes, reported making honor roll for the first time after missing it previously. Claudia reported being more focused and improved work completion in three of four classes. Three of the participants (Amelia, April, and Corinna) discussed how the intervention made independent practice game-like and they described an internal competitiveness to at least meet if not exceed what they had predicted for themselves.

Taken collectively, the intervention appeared to have made a positive impact. In particular, participants' perceptions of themselves as self-determined improved slightly and reported positive changes in their school experience seem to indicate such a positive impact. Though mixed, data related to on-task behaviors, work completion, and redirections seemed to show some improvement. In particular, many of the ranges decreased with improved scored at the lower end. Such a

pattern could indicate that the variability in performance so often seen in students with emotional and behavioral disabilities was beginning to stabilize.

CHAPTER 5: DISCUSSION

In regards to the first research question, which evaluated if the *plan, work, evaluate, adjust* self-determination intervention improved the academic engagement behaviors of students with emotional and behavioral needs, the results were largely mixed and not consistent. Academic engagement behaviors examined in this study included increasing time on task, increasing work completion, and reducing redirections back to task. All four participants demonstrated progress on some variables in some classes and regressed in others.

There were several issues that may have provided such inconsistent data. First, students with emotional and behavioral needs are often inconsistent with their behaviors from day to day. Second, some of the participants demonstrated a "ceiling effect" in the baseline condition. Amelia, for example, completed 100% of her work in the baseline and intervention conditions in Social Studies and completed 100% of her work in the baseline condition for English and 100% of all her work in English class except for one data point. Consequently, there was no room for improvement and performance short of perfection would skew the data negatively. Third, the intervention time was short with students using the Plan, Work, Evaluate Adjust strategy for a total of only 6 weeks for Science decreasing to only 1 week for Math. Using a multiple baseline design also shortened the time for some classes; for example, there were only three data points observed during Mathematics.

Several reasons for such a short intervention time included the timing of the study relative to the school year and, days missed due to standardized testing.

Additionally, both teacher and student absences may have impacted the results. In particular, teacher absences were an issue. Each teacher missed at least one week of time during the study due to life events. Much less of an attendance issue, but still contributing to the short intervention time, teachers were pulled from the classroom to work with students in crisis. Shifting from baseline to intervention was delayed several times throughout the study as a result of teachers not being in their classrooms to teach.

However, despite large class sizes (17-19 students), and the interruptions due to attendance, teachers reported being able to extend the independent practice section of a lesson from approximately 5 minutes to approximately15 minutes. Further, teachers reported increasing the workload during independent practice. For example, the Science teacher reported extending the number of problems/ questions for students to complete from 3-5 to 15-20.

Perceptions of Self-Determination

All four participants showed modest improvement in their perceptions of self-determination, which is impressive given the short nature of the intervention. Prior to the intervention, participants rated their perceptions of their own self-determination using the AIR Self-Determination Scale (Wolman et al., 1994). All four participants rated themselves what would amount to "above average" (all combined raw scores were above 50 on a scale of 0-100). For three of the four participants, those raw scores increased post-intervention. Such increases could be expected when comparing the rating scales with participant interviews, although

such conclusions should be drawn with caution if compared with on-task, work completion, or redirection data.

All four students discussed the benefit of the intervention for them personally using descriptors like "more focused" or "more mindful." One student reported achieving Honor Roll for the first time. Taken collectively, the intervention seemed to have had a positive effect on the participants' perceptions of their own self-determination. Participants seemed to express a "new found" interest in completing schoolwork. For example, Amelia stated, " I would have been working, but then the bell would and I would be like 'Oh, that's the bell and I only got this much done'. The more I keep time in mind, the more I get done. (X9, pg89)." Corinna mentioned, "rushing through stuff" prior to the intervention, but found herself, "reading questions more carefully and actually answered it. (Y10, pg91) " Both Amelia and Corinna discussed academic improvements, specifically with grades. Amelia reported making honor roll for the first time and Corinna reported struggling to pass Biology previously, but now was getting A's and B's. Claudia discussed never really completing assignment prior to the intervention, but now "I started doing them because I really knew what I had to do and it was right in front of me." Collectively, the participants were more positive about schoolwork, were completing more of it, and were seeing the results in their grades. Such reports are important because chronic academic failure has been found to be a strong predictor of dropout (Battin-Pearson, 2000).

Such information is encouraging since Hardre and Reeve (2003) found that students who perceived themselves to be self-determined were more likely to

persist in finishing school. Further, self-regulation is a precursor to acting successfully with autonomy (Weinstein & Ryan, 2011). Students reports seem to suggest that the intervention was leading toward self-regulating their classroom behaviors. However, such interpretations should be made with caution. The classrooms were self-contained emotional support classrooms and not general education classrooms. Previous research suggests similar patterns of students with emotional and behavioral disorders perceiving themselves to be at least moderately self-determined (Carter et al., 2006; Carter et al., 2010). Carter et al. (2006) suggested that such perceptions might be due to students evaluating themselves with classroom peers and not against typical behavioral norms seen more commonly in the general education classroom.

However, when teachers rated the students on the researcher created Self-Determination Scale, those Likert Scale scores were more modest. For example, with the data combined from the three teachers who submitted the scales, Claudia had been rated as demonstrating particular skills "often" only four times, but was rated as "rarely" demonstrating the particular skill 20 times. Such a contrast is not specific to this study. Previous research (Carter et al., 2006; Carter et al., 2010) had reported similar patterns. It is unclear why such differences in perceptions might exist. As suggested by several researchers (Houchins, 2002; Van Gelder et al., 2008; Carter et al., 2010), the participants may have a higher perception of their self-determination since they are in a highly structured environment.

However, it is also possible that teachers may underestimate the actual ability of their students, in this case, the participants of the study. Hoffman and

Field (1995) found that students with disabilities are often viewed as needing protection. Consequently, it is possible that teachers' perceptions of student ability could be limited based on personal bias regarding disability. Also we don't give them many opportunities to learn or demonstrate self-determination, self-etc. – which is an important recommendation, that we develop an integrated and developmental approach to teaching self-skills

Future research may benefit from exploring such a discrepancy especially if teachers are underestimating the ability of their students. By underestimating the ability of their students, teachers could be planning lessons and organizing classrooms that are structured in such a way that opportunities for students to practice self-determination may be limited. Consequently students may have little opportunity to demonstrate self-determination skills. This lack of opportunity for students to practice self-determination skills may limit students to access to the least restrictive environment. Given that teachers largely control the classroom environment, students could be restricted from opportunities necessary to develop needed self-determination skills, which may result in students who may be successful in a general education classroom remaining in special education classrooms due to skill-deficits (Carter et al., 2008; Weinstein & Ryan, 2011). Those deficits, unfortunately, can be linked to lack of opportunity rather than lack of ability.

Self-Reported Changes in School Experiences

All four participants reported a positive experience with the intervention. One participant (Amelia) reported making honor roll for the first time. The

participants' comments specifically were related to an increasing confidence and independence as students. Of particular interest were specific words that the participants used in describing who they were as students prior to the intervention and after the intervention. Claudia frequently spoke of being "more focused" with the intervention present than without it. Amelia used the word "mindful." Several participants remarked that they were disengaged from schoolwork, found schoolwork "boring," and generally didn't have much interest in teacher-assigned schoolwork prior to the intervention. Post-intervention, the participants claimed that they had improved grades (even made honor roll for the first time), found the intervention to increase their internal competitiveness to exceed the goal they established for themselves, and even had one participant asking more questions in class. Behaviors such as asking teachers more questions or seeking to complete work to meet a goal are also indicative of academic engagement.

One of the variables most closely associated with student dropout for students with emotional and behavioral disabilities is academic difficulty (Landrum et al., 2003; Kemp, 2006). One of the hopes for this intervention is that it might be a useful tool to enhance student academic engagement, which potentially may influence academically disengaged students to remain in school until graduation. The comments made by the participants seem to suggest that their academic engagement did increase and that their confidence and independence as students may have also improved as a result of the intervention. Further, when asked, all four students stated they would be interested in continuing with the intervention for the next school year. It seems that students who are actively engaged in school

would be more likely to complete school with active academic engagement serving as a protective factor.

Self-Determination Skills and Potential for Dropout

According to the National Center for Statistics (2008), Forty-three percent of students classified with emotional disturbance leave school without graduating. Given that Scanlon and Mellard (2002) found that the most significant variable to dropping out of school was academic difficulties, the fact that the 4 participants reported positive changes in their academic engagement and that two participants reported improved grades is encouraging.

Interestingly, Bear et al (2006) found that factors such as lack of motivation were more critical factors for risk of dropout than academic skill deficiencies. Participants reported sleeping in class, doing work because it was assigned, or not attending to time during the baseline phase of the study. However, during the intervention, participant reports indicated not sleeping in class, being mindful of time and asking teachers clarifying questions.

Finally, for students who do not complete school, research (Vallerand 1997 et al) indicated that those students tend to exhibit less intrinsic motivation than students who complete high school. Baseline reports from participants included sleeping in class, not working with any sense of time, or asking questions that would improve grades. All three examples could be considered behaviors associated with a lack of intrinsic motivation. However, participants reports from the intervention include a mindful focus on time, asking questions, and focusing on work instead of sleeping in class. The latter behaviors would be indicative of an intrinsically

motivated student. While further research is needed before making any seemingly definitive statements, it appears that there is potential for the "*Plan, Work, Evaluate, Adjust"* to enhance intrinsic motivation. Many students at risk of dropout have experienced repeated failures in school and with academics specifically (Hardre & Reeve, 2003). Such repeated failures can be damaging to the development of intrinsic motivation (Bandura & Locke, 2003; Kemp, 2006). Further, Hardre and Reeve (2003) found that students who reported themselves to be self-determined and competent were more likely to engage in and persist through school to completion. Success can breed a sense of competence. Consequently, as the participants experienced an increase in the amount of time they worked independently and the amount of work they were able to complete, it is possible that the participants were experiencing a sense of competence with academic tasks.

Limitations

Limitations include the span of time for the intervention and a limited sample of participants (four female high school students). In addition, the study took place in one school in the eastern part of the United States. Generalization to settings or to males could not be made.

A number of limitations exist in the interpretation of the data in this study.

First, each of the four teachers had missed at least one week of instruction during the intervention. In addition, one of the instructional assistants did not attend the final three inter-rater reliability checks. The study also was limited by three snow days and 6 days for state exams. Consequently, the number of baseline

days is excessive for Math and Social Studies with a sparse number of intervention days for the two content areas. One recommendation for next time is to do baseline probes rather than ongoing baseline data points to reduce the number of observations & baseline data points.

Another limitation is that the Social Studies teacher did not return the rating scale for self-determination for the participants and did not respond to requests for to be interviewed. It is possible that her participation may have provided more consistency to the existing data.

The classrooms where the intervention took place had between 17 and 19 students with emotional and behavioral support needs in the classroom for the duration of the study. A class of this size with students with emotional and behavior needs can make classroom management and the management of an intervention difficult. Further, the teachers seemed to have adapted to the classroom environment and initially minimized independent practice to as little as 5 minutes per class. With the intervention, that time increased to approximately 15 minutes across content areas. While promising, the data reflects this timeframe; the actual standardization of a 15-minute independent practice session did not begin until approximately 6 weeks into the study.

One implication directly associated with this study would be the timing of the initiation of the intervention. This study began in mid-March and concluded in June due to the end of the school year. Several limitations to the study occurred based partially due to the onset of the intervention. For example, standardized testing caused a break in the intervention. While student attendance was not stellar,

teacher attendance was concerning. Each teacher missed at least one week of consecutive days. Such unexpected events can happen and it would have been interesting to see if the intervention had a more noticeable impact on the participants' performance if the intervention had a greater duration and/or fewer interruptions.

One potential consequence of the shorter independent practice sessions during baseline that may have skewed the data is that some students may have reached a ceiling effect rather quickly. To achieve 100% work completion for 3-5 questions is not comparable to 100% work completion for 15 questions. That said, one student in particular maintained close to 100% for on-task and work completion behaviors and 0% for redirections for the baseline condition and for the intervention condition. Such performance potentially calls into question the appropriateness of the placement for the student. One might question if this student should have been in more general education classes.

Implications for Future Practice

Evidence (Wehmeyer et al., 2000; Martin et al., 2003; Wehmeyer et al., 2012) seems to suggest that self-determination is a promising instructional tool and that students benefit from teachers incorporating self-determination instruction into a school day. Unfortunately, few teachers have the appropriate training and understanding of self-determination to be effective in facilitating the acquisition of self-determination skills (Vallerand et al., 1997; Denney & Daviso, 2012).

Consequently, one recommendation is that pre-service teaching institutions focus on preparing pre-service teachers to facilitate self-determination skills into

their teaching practices. For example, Cho, Wehmeyer, and Kingston (2010) found that only 60% of general educators and 78% of special educators had any familiarity with the concept of self-determination, but both groups placed equal value on teaching the components of self-determination. Often times, important skills such as self-determination are packaged in a curriculum such as *Take Charge* (Greenen et al., 2013). Such packaged curriculums may be beneficial to students. However, without a teacher who understands self-determination and provides opportunities for students to master self-determination skills, packaged curriculums are often a collection of worksheets with positive intentions and the skills taught within those curriculums are not likely to generalize to other settings thereby minimizing necessary opportunities for practice. While Cho et al. (2010) found that a reasonable percentage of elementary teachers were familiar with self-determination, in terms of instructional time allowed for specific components of self-determination, the highest correlation reported was for choice making at 0.38. Goal setting did not reach statistical significance for general or special education teachers. One must then distinguish the difference between familiarity and understanding.

Further, school districts could provide meaningful professional development opportunities for self-determination facilitation. Carter et al. (2015) found that most school administrators consider the seven skills associated with self-determination to have high importance, but that such skills were seldom taught so there is administrative value at the building level. Further, administrators did not differentiate importance between general and special education students (Carter et

al., 2015) making the prospect of administrative buy-in at the building level promising. A cultural shift from a typical focus on content specific instructional strategies to providing a climate where students can practice autonomy, self-regulation, sense of empowerment, and self-realization through action can only happen with systemic and comprehensive goal-setting and support from district level administrators to building-based leadership to individual teachers (Wehmeyer & Field, 2007). Such professional development could consist of teacher collaboration, mentoring relationships, or learning circles (Carter et al., 2015).

Cho et al (2010) reported that at least half of general and special educators stated that there were more urgent needs than self-determination on which to focus. Insufficient time, lack of training and age of students were also cited as barriers to self-determination instruction during the school day (Cho et al., 2010). Given the results of the Cho et al (2010) study, it seems that in order for self-determination instruction and opportunity to become common practice, a cultural shift would be in order. This is not to suggest that content specific instructional strategies should be ignored, but rather that incorporating self-determination instructional capacity is necessary to student well being by carefully addressing the obstacles school personnel face every day.

Such a cultural shift should begin in the early elementary years and be pervasive through classrooms for both students with and without disabilities. Many students encounter life difficulties such as homelessness, parental absence, or other potentially traumatic events. Events such as these will add stress to a students' life. Often, poor academic performance soon follows. Perhaps, if schools provided a

greater focus on self-determination skills, students may have the skills to mitigate some of the stress of outside life events by developing an autonomous orientation for students (Deci et al., 1992; Weinstein & Ryan, 2011).

Ultimately, teachers should not have to rely on canned curriculum to address self-determination if proper and substantive professional development and support is provided from district administration. Most self-determination skills can be addressed within a lesson plan within the classroom environment. Self-determination skills such as goal setting or choice making can be woven into an academic setting such as a classroom with little instructional time. For example, this study used a self-regulating sheet during independent practice. Instructional time took around 15-20 minutes one time. With such minimal invasiveness, there is little reason not to implement self-determination instruction into classrooms. In addition, interventions such as this could be utilized as Tier 2 interventions for students struggling in general education classrooms prior to engaging in consideration for special education. Given the limited time needed for instruction and for completion within the academic setting, such an intervention may be suited for maintaining students in the general education environment.

Regarding teacher implementation of this intervention, the intervention seemed to fit easily into a lesson causing little disruption. Ideally, the intervention would begin at the outset of the school year. By starting the intervention at the start of the school year, implementation may be more seamless and efficient than if implemented mid-year.

Another recommendation is that independent practice should be a standardized time for both baseline and intervention conditions. For example, 15 minutes at the end of every class would be sufficient. In this study, teachers reported that work output increased from 3-5 problems to 15-20 problems generally for all students, not just the participants. Converging with the previous statement about beginning at the start of the school year, a solid 15 minute block of time for independent practice would be helpful to teachers assessing student learning as well providing opportunities for students to gain practice with skills such as goal-setting and choice-making associated with self-determination.

Another area worth exploring for future implementation is to include students in the conversation related to their learning. The interviews for this study provided input from the students that could not be obtained from the quantitative data collection measures. Having conversations with students, especially related to how they learn can be a great benefit for the teacher and for the student. In particular, conversations with secondary students can be productive and insightful. In this study, students reported that the self-regulating intervention employed provided them with better metacognitive performance and executive functioning skills. Examples such as asking more questions, staying focused achieving a given goal, and being more aware of time within the context of a class all suggest that secondary students, in particular, can provide meaningful insight into how they learn, what strategies are beneficial, and how those strategies impact the outcome of their learning.

Implications for Future Research

Two important considerations for future research with this type of study would be to obtain measures of the amount of time teachers are allowing for independent practice and to obtain a baseline of how much work is being completed by each participant prior to implementing the study. Standardizing the independent practice section of the lesson would be ideal. For example, for this study, a standard time frame of 15 minutes for baseline and intervention may have provided more meaningful data.

Another area work exploring is that of the difference in perceptions of self-determination between teachers and students (participants). Evidence seems to suggest that teachers perceive the students (participants) as less self-determined than the students perceive themselves. One can speculate many reasons related to the discrepancy, yet it would be beneficial to have a study examining such a difference especially since adult support serves as a protective variable for students at risk of dropout (Ehrenreich et al., 2012; Knesting & Waldron, 2006). The reasons may be important to providing opportunities for students to practice their self-determination skills.

Dependent measures may be worth exploring as well. In this study, on-task behaviors, work completion, and redirections were measured as dependent variables. Results for all three were mixed. However, Martin et al. (2003) noted that teachers and classroom observers both noted "marked decreases in students' inappropriate social and physical behaviors after they began completing the self-determination contracts (p.443)." It is possible that dependent measures examining verbal or physical outbursts, socially inappropriate comments, or behaviors

associated with resisting the task could provide a greater sense of difference from baseline to intervention.

Further research may directly explore the relationship between self-determination, goal setting, and support from adults. In other words, how much of a component of resilience is self-determination? For example, Benard (2004) lists the four major personal strengths associated with resilience as social competence, problem solving skills, autonomy and a sense of purpose and a bright future. Such personal strengths seem related directly to self-determination. Within the context of problem solving skills, for example, are skills such as planning, flexibility, and resourcefulness. Given that components of this self-determination intervention include planning, evaluating and adjusting a given plan, skill such as flexibility and resourcefulness seem to be necessary. It seems worth investigating if teaching self-determination skills can positively influence resilience of at risk students.

Future research may also standardize the independent practice section of a lesson from the outset of the intervention. The intervention in this study was performed with the attempt to be as minimally invasive to teachers as possible. However, what was not anticipated was the large class sizes and the teachers' adaptations to the class size. Interestingly, the Science teachers decided he could expand the independent practice section of a lesson and increase the amount of work expected within 3 data points.

With high stakes testing accountability so high and instructional time at a premium, there is little time for teachers to add isolated lessons or incorporate a packaged curriculum that does not relate specifically to a given content area. The

intervention in this study provides some promise as an intervention that can fit within the context of an instructional lesson without compromising instructional time. For students who need support in self-determination skills such as planning and goal-setting, interventions such as the self-monitoring tool used in this study, ease of implementation and efficiency of implementation are likely to garner support and buy-in from the teachers asked to implement such strategies. In fact, that is what makes the Self-Determined Learning Model of Instruction (SDLMI) so intriguing as an instructional model. As Wehmeyer et al (2000) state, "The model provides a process that teachers can use and adapt to their own professional preferences and instructional strengths (p.450)."

Ideally, these skills are skills that would be taught in elementary school with all students. Research on self-determination has largely focused on students with disabilities and often students with more severe cognitive or emotional and behavioral disabilities. It ought be expected that researchers would focus on students with more intensive needs since those are the students more likely to be excluded from society whether it be the neighborhood public school or a given job site. However, more research seems to be needed for students who are at least in the neighborhood school, if not, fully included. It's presumptuous to assume that because a student is meeting with some modicum of success or demonstrating high grades in an inclusive environment, that the student already possesses skills such as planning and goal setting.

Finally, this study attempted to evaluate self-determination instruction as a potential dropout prevention tool. With students who have emotional and

behavioral disabilities comprising the largest group of students who dropout National Center for Education Statistics, 2008), implementing this study in emotional support classrooms seemed logical. One of the hallmark signs of students who dropout is academic disengagement (Dunn et al., 2004; Kemp, 2006) and several of the participants volunteered that they found themselves disengaged from academic achievement prior to the intervention. Encouragingly, those same participants mentioned that they experienced improved academic performance during intervention as evidenced by improved grades, asking more questions, and completing an increased workload when compared to baseline.

While more investigation is necessary, it seems that self-determination instruction like SDLMI may serve as an effective and inexpensive tool that is easy to implement and could provide invaluable skills for students at risk of dropout. Such an approach may be one method districts can use that would ameliorate the dropout crisis and guide students at risk of dropout to graduation with lifelong skills. Further research would be needed specifically with students who are either stating that they intend to dropout or have dropped out and are returning to school as many students do.

Summary

Overall, the *Plan, Work, Evaluate, Adjust* self-determination intervention seemed to have a positive effect on the participants. Participants reported that they experienced increased school success with improved grades and work completion. Teachers reported being able to, in one instance, triple the amount of time for independent practice and increase the workload of students by as much as five

times. The intervention requires very little training and seemed to generalize to other settings quickly. Altogether, the *Plan, Work, Evaluate, Adjust* intervention seems to hold promise as an effective, efficient, and inexpensive intervention. The results, while cautiously interpreted, suggest further study with increased standardization may yield benefits that could be reported with greater certainty. Additionally, the short student interview seemed very beneficial. With secondary students, we often do not afford those students, especially students in special education, the opportunity to speak for themselves, to tell their story, or to provide testimony to what works for them or what doesn't work for them. There is very little intervention research focusing on secondary students with high incidence disabilities using the Self-Determined Learning Model of Instruction (Wehmeyer et al., 2000). A continuation of such research would be beneficial.

Appendix A

Treatment Fidelity Checklist
Initial Preintervention

Step	**Yes**	**No**
Explicit instruction on purpose of self-determination contract.		
Explains to students that they will take control of how independent time is used.		
Includes what time independent practice will begin.		
Includes what will be worked on during independent practice.		
Includes when students will stop working.		
Approve student plan.		
Negotiate with student over differences that include:		
• Time (e.g. student may choose to work for a small amount of time)		
• Quantity of work (e.g. student may choose to work for significantly less than the time allotted for independent practice)		
• Work is related to what is assigned (e.g. student may choose to a different task or work from another class)		
Total		

Following Sessions (4 Intervention Sessions)

Step	**Yes**	**No**
Answer questions about self-determination contract.		
Reinforce scheduling of own work by students (and recreational time).		
Provide no additional instructions to students.		
Help correct content errors.		
Approve plans and negotiates differences in plans that may need support for time, quantity of work, or work related to the assigned task.		
Teacher prompts students who do not start within 5 minutes of independent practice session starting.		
Teacher grades completed work for accuracy.		
Total		

Appendix B

Academic Engagement Tracking **Date:**

Student	Work Completion	Redirections	Time On-Task											
			Begin: Minute 1				**Minute 2**				**Minute 3**			
S1														
S2														
S3														
S4														
S5														
S6			**Middle: Minute 4**				**Minute 5**				**Minute 6**			
S7														
S8														
S9														
S10														
S11			**End: Minute 7**				**Minute 8**				**Minute 9**			
S12														
Total														

Appendix C

Self-Determination Teacher Rating

Self-Determination Characteristics	Rarely	Some	Often	Always
Student can identify specific strengths and instructional needs.				
Student can prioritize needs or work to be completed.				
Student can state a goal and identify criteria for achieving the goal.				
Student can develop plan of action to get from current status to identified goal status.				
Student can develop a schedule and follow an action plan to achieve a goal.				
Student can evaluate progress toward a goal.				
Student can reevaluate goal if progress is insufficient.				
Student can change action plan if needed.				
Student can monitor progress by self.				
Student can decide if goal needs to change or remain the same.				

Appendix D

Interview Questions

1. Think about before the strategy. When teachers gave you a task, did you feel that you need a lot of support with planning and finishing assignments? How about now? Do you feel more independent and confident when teachers assign work?

2. Tell me about the kinds of goal setting and planning you did before learning the plan, work, adjust, and evaluate strategy.

3. Tell me about how you felt about schoolwork before you learned this strategy? (Did you look forward to learning or was it something you just did because you had to or didn't do much at all? How about now?)

4. Do you do any of this kind of planning in other areas of your life (e.g. at work or at home)?

5. What are some of the changes in your learning and performance that you saw during the strategy (e.g. work completion, grades, or being more focused on schoolwork)?

6. What did you like about the strategy? Did you feel that it helped you in any way to be more successful? How?

7. Do you think you'll continue to use this strategy in other classes? Why or why not?

Appendix E

Self-determination Contract

Name: Date _____----_____

Page # _____ Problem # _____

_____ I read my last adjustment statements.

Plan							
Time Begin	*Date*	*Subject*	*Objective 1*	*Objective 2*	*Objective 3*	*Time End*	*Approval*
	_____	Math	# problems ____	# correct__ __	# points ____		_____
	_____	Math	# problems ____	# correct ____	# points ____		_____
	_____	Math	# problems ____	# correct ____	# points ____		_____
	_____	Math	# problems ____	# correct ____	# points ____		_____
	_____	Math	# problems ____	# correct ____	# points ____		_____

Work							
Time Began	*Schedule*	*Subject*	*Objective 1*	*Objective 2*	*Objective 3*	*Time End*	*Approval*
	_____	Math	# problems ____	# correct ____	# points earned ____		_____
	_____	Math	# problems ____	# correct ____	# points earned ____		_____
	_____	Math	# problems ____	# correct ____	# points earned ____		_____
			#		# points		

	_____	Math	problems ____	# correct ____	earned ____		_____
	_____	Math	# problems ____	# correct__ __	# points earned ____		_____

Evaluate						
	Monday	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	
Began on time?	Yes No	Yes No	Yes No	Yes No	Yes No	
Completed planned number?	Yes No	Yes No	Yes No	Yes No	Yes No	
Completed planned number correctly?	Yes No	Yes No	Yes No	Yes No	Yes No	
Earned planned number of points?	Yes No	Yes No	Yes No	Yes No	Yes No	
Ended on Time?	Yes No	Yes No	Yes No	Yes No	Yes No	

Adjust						
Next Time:	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	
Begin Work:						
Earlier	---_____	_____	_____	_____	_____	
Later	---_____	_____	_____	_____	_____	
Same Time	---_____	_____	_____	_____	_____	
Complete:						
More pages /problems	---_____	_____	_____	_____	_____	
Same number pages/prblm	---_____	_____	_____	_____	_____	

s						
Work Number of Prblsm/Pgs Correctly:						
More	---_____	_____	_____	_____	_____	
Same	---_____	_____	_____	_____	_____	
Earn _____ Number of Points:						
More	---_____	_____	_____	_____	_____	
Same	---_____	_____	_____	_____	_____	
End Work:						
Earlier	---_____	_____	_____	_____	_____	
Later	---_____	_____	_____	_____	_____	

Appendix F

Parental Consent Form

April 7, 2017

Dear Parent,

My name is *Edward Sczesniak* and I am a doctoral student at Arcadia University in Education. As part of a requirement for degree completion, I am conducting a research study titled "An Examination of a Self-Determination Strategy on Academic Engagement Behaviors for Students with Emotional Support Needs At Risk of Dropout". I am asking your permission to include your child in this study, which will support independent goal setting and planning for academic assignments.

The focus of my research is *to teach students a strategy to improve independence while doing classwork. The self-determination strategy will teach students to plan their work, complete assignments and check to see if their plan worked well or needs to be adjusted. The strategy will be taught as part of instruction in* ***all 10th-11th*** *grade Emotional Support classrooms and will last approximately twelve weeks.* This is a topic that is important to the field of education, and by conducting this research we will be able to understand more about self-determination for students with emotional disabilities and if teaching the strategy improves both how students act as students and see themselves as students.

The following activities are part of the study, should you be willing to allow your child to participate: 1) *students will receive instruction in the Plan, Work, Evaluate, Adjust strategy and 2) will learn to use the strategy when they are practicing newly learned skills and completing assignments. Your consent allows your child to*

complete 2 rating scales. The first is how self-determined they consider themselves to be before and after learning the strategy. The second will tell me how students perceive their teacher allowing them make choices and demonstrate independence. Your consent will also allow for data to be collected ***by the classroom instructional assistant*** *on how much work is completed, how many times students are redirected back to task, and how often they are on-task before and after the strategy is taught. This information will tell us if the strategy works. Your consent will also allow for your child* to possibly be interviewed briefly (i.e. 20-30 minutes***)*** *regarding what they thought of the strategy and if they see themselves as better students since learning the strategy.* Students can pass on any questions they choose not to answer for any reason. There will be no penalty in any way for refusing to answer interview questions. *Students can also participate, but not be audio-recorded. I will take notes if that situation arises.*

All interviews will be recorded and transcribed unless a student chooses not to be recorded. ***Data will be saved in a password protected Ipad and saved under a pseudonym. Upon transcription, the audio files will be deleted.*** No one will have access to these transcripts but me. ***Transcripts will be destroyed kept in a locked file cabinet in the PI's home and destroyed after three years.*** You may choose to not allow your child to participate, or stop participation at any time, without negatively affecting your relationship with school personnel, work-related evaluations, Arcadia University, or myself.

I am also the secondary special education supervisor for Bensalem High School. Your decision to allow or not allow your child to participate will not affect

his/her grades, your or his/her relationship with the school or school personnel, the School District, or Arcadia University. If you have any questions about the study you can e-mail me at: *esczesniak@arcadia.edu* or you may call the supervisor of the project, *Dr. Christina Ager, 215-572-2115.*

The school district superintendent and Arcadia University Institutional Review Board (IRB) have approved this study. To ensure that this research continues to protect your rights and minimizes your risk, the IRB reserves the right to examine and evaluate the data and research protocols involved in this project. If you wish additional information regarding your rights in this study you may contact the Office for the Committee for the Protection of Research Subjects at (267) 620-4111.

Enclosed is a copy of this consent form that you may keep for your records. Please send one copy back, signed, in the stamped envelope provided if you agree to allow your child to participate.

Your signature below indicates that you have read the information provided above and have decided to allow your child to participate in the study. Please sign each of the activities your child can take part in and whether you allow me to audio record the interview. I appreciate your willingness to allow your child to participate. If you later decide that you wish to withdraw your permission for your child to participate in the study, simply tell me. You may discontinue his or her participation at any time. If you chose to withdraw your child from the study, I will destroy any information collected from him/her up to that point. **You can withdraw your child from the study by notifying myself at the email address above or via phone at**

215-750-2800 ext. 4113. You do not need to provide any reason for withdrawing your child from the study.

I am looking forward to learning from this project and hope it will contribute to the field of education, particularly in reference to inclusive classrooms.

This study has been explained to me, I have read the consent form and have been given a copy of this consent form.

a) My child can take part in:

Completing rating scales _____
Parent/guardian signature

Allowing instructional assistant to collect information on amount of time on-task, work completion, and
redirections back to task.
_____
Parent/guardian signature

b) I allow for the interview to be audio-recorded _____
Parent/guardian signature

_____
Date

Appendix G: Participation and Consent Form for Special Education Teachers

Dear Special Education Teacher: May 14, 2014

My name is Edward Sczesniak and I am a doctoral student at Arcadia University, Department of Education. I am also the secondary special education supervisor for your high school**.** You are invited to participate in a study I am conducting for my doctoral dissertation on the topic of self-determination. I am interested in learning about the self-determination of students who have had difficult experiences in life and if we can improve their self-determination by teaching them a self-management strategy.

The title of my project is "An Examination of a Self-Determination Strategy on Academic Engagement Behaviors for Students with Emotional Support Needs At Risk of Dropout." This study is important **because the findings may** make a contribution in the area of self-determination instruction.

I am asking for your participation because you are the teachers in the emotional support classrooms. I hope to have four emotional support teachers participating in the study.

The project will take approximately 12-15 weeks. Participation is voluntary and will include the following:

1. Attending two training sessions to discuss self-determination and the project. One session will be to discuss self-determination and the project. The second will be reach agreement on whether or not students can earn points and how those points may contribute to positive reinforcement as

well as the length of time for the independent practice section in a lesson. **The sessions will not last longer than 50 minutes.**

2. Teaching the self-determination strategy initially daily, and then during the

   independent practice section of each lesson (approximately 15-20 minutes).

3. Participating in fidelity checklists to make sure the teaching is following the prescribed plan for approximately 10-15% of total lesson (at least 6 times). **You will receive the fidelity checklist in your training. The PI will be checking "yes" or "no" for each component.**
4. Supporting your instructional assistants who will be trained and asked to collect data on on-task behavior, work completion, and redirections.
5. **Hand out or have Instructional Assistant hand out the self-monitoring contract sheet.**
6. Helping students **to** complete a contract in which they use the strategy.
7. Coaching and supporting students in using the strategy
8. Assess**ing** whether the student met his/her goal or not.
9. Participating in one very short interview regarding the usefulness of the strategy that will last approximately 15 minutes. **In the event that the interview is recorded to an audio file, the PI will be using a password protected Ipad and each audio file will be given a pseudonym. The audio files will be deleted as soon as the PI has transcribed the information. Any transcriptions will be kept in a**

locked file cabinet in the PI's home for three years and then destroyed.

10. **Keep self-monitoring contracts in your desk until the PI comes to pick them up from you.**

As the researcher, I will keep all information from interviews and data confidential. Real names of students and teachers will not be used. You can, at your discretion, withdraw from this study at any time. If you choose to withdraw, I will destroy any information collected from you up to that point. The study will take place between October and January 2015.

Your decision to participate or not will not affect your relationship with the school, other school personnel, the School District, Arcadia University, or myself. As your district special education supervisor, I want to assure you that your decision will not impact your evaluation as a teacher in any way.

If you have any questions about the study, you can email me at **esczesniak@arcadia.edu** or you may call the supervisor of the project, Dr. Christina Ager. The school district superintendent and Arcadia University Institutional Review Board (IRB) have approved this study. To ensure that this research continues to protect your rights and minimized your risk, the IRB reserves the right to examine and evaluate the data and research protocols involved in this project. If you wish additional information regarding your rights in this study, you may contact the Office for the Committee for the Protection of Research Subjects at 267-620-4111.

Enclosed is a copy of this consent form that you may keep for your records. Please send one copy back, signed in the envelope provided if you agree to participate. Your signature below indicates that you have read the information provided and have decided to take part in the study. Please sign each of the activities you agree to take part in and whether you allow me to audio record the interview. I appreciate your willingness to participate in the study. If you later decide that you wish to withdraw your participation in the study, you may do so at any time. **If you choose to withdraw at any time, you only need to notify myself in any manner you choose. You will not be required to provide a reason for withdrawal.**

I am looking forward to learning from this project and hope it will make a meaningful contribution to the field of education and self-determination.

Consent:

This study has been explained to me. I have read the consent form and have been given a copy of the consent form. I, _____, agree to take part in:

Teaching the strategy _____
Signature

Observation**s** to ensure intervention are being taught as prescribed.

_____
Signature

One interview regarding the usefulness of the intervention.

_____
Signature

I allow for the interview to be recorded.

_____
Signature

Date _____

Appendix H: Participation and Assent Form for Students

Dear XXXXX:

Hello, my name is Edward Sczesniak and I am a university student doing a study in your school. I am also the special education supervisor for the high school. The study is a project on teaching students with IEP's how to do school work more independently by teaching those students a strategy. I am also interested if teaching this strategy to students with IEP's to see if it changes how those students think about school.

I would like for you to participate in this study and learn this strategy. **skip any questions you don't want to answer. For the strategy,** your teachers will teach you the strategy as part of class and help you learn the strategy when you are practicing assignments your teacher has given you to learn new skills. **The strategy will be used during the independent practice part of a lesson (about 15-20 min of class). A part of the strategy will be to complete a self-monitoring sheet. For the self-monitoring sheet, you will plan how much work you will complete will the goal of completing what you have planned to complete and then evaluate and adjust the plan if you didn't meet your goal. This self-monitoring sheet should take under 5 minutes to complete and will be part of the lesson.**

There is also the possibility that I might ask to schedule an interview with you after you have had a chance to learn the strategy to see if the strategy helped you and if you feel more positive about school and schoolwork. The interview should last about 20-30 minutes.

I will **also** be asking you to complete some short surveys that should take approximately 15-20 minutes to complete to tell about how you see yourself and doing things independently as well as if your teachers allow you choices in your learning. There will be two surveys in the beginning and one at the end of the study. **You can skip any questions you choose to and I will be available to read the surveys to any one who needs the surveys read to him/her.** I will visit your classroom occasionally to make sure your teachers are sticking to the steps for teaching the strategy.

During the interview, if any of the questions make you uncomfortable, you do not have to answer them. We can skip those questions and move on to something else. I would like to record our conversation to make sure I have everything just as you said it. If you are not comfortable with me recording our conversation, I will just take notes. No one will have access to the ipad except for me. However, just in case, I will give everyone a different name during our conversation and then delete our conversation when the study is over. **The Ipad will be password protected and your recording will be saved under a different name. I will delete the audio recordings as soon as I am finished with the project. I will keep the transcriptions in a locked file cabinet in my home for three years and then destroy the transcriptions.**

Your parents have given permission for you to participate. However, you can say "no" to participating and can drop out at any time. Your choice to participate will not affect your grade or your relationship with your teacher, the school, or myself. My role in the school district should have no impact on your decision to

assent and will have no negative consequences to you if you decide not to assent. You can ask questions at any time. If you choose to withdraw, please contact me, Edward Sczesniak, at esczesniak@arcadia.edu or Dr. Christina Ager, the supervisor of the project at 215-572-2115. **You do not need to offer a reason as to why you decided to withdraw.**

Please sign below if you agree to participate in the study and if it is okay for me to record my interview with you.

I would like to participate in the study by allowing data to be collected: _____

Your Signature

I will participate in the interview if selected: _____

Your Signature

It is okay to record the interview: _____

Your Signature

I will participate in the interview, but prefer not to be recorded.

_____

Your Signature

Date: _____

Appendix I: Instructional Assistant Consent

Dear XXXXX:

Hello, my name is Edward Sczesniak and I am a university student doing a study in your school. I am also the special education supervisor for the high school. The study is a project on teaching students with IEP's how to do school work more independently by teaching those students a strategy. I am also interested if teaching this strategy to students with IEP's to see if it changes how those students think about school.

I would like for you to participate in this study and learn this strategy. **skip any questions you don't want to answer. For the strategy,** your teachers will teach you the strategy as part of class and help you learn the strategy when you are practicing assignments your teacher has given you to learn new skills. **The strategy will be used during the independent practice part of a lesson (about 15-20 min of class). A part of the strategy will be to complete a self-monitoring sheet. For the self-monitoring sheet, you will plan how much work you will complete will the goal of completing what you have planned to complete and then evaluate and adjust the plan if you didn't meet your goal. This self-monitoring sheet should take under 5 minutes to complete and will be part of the lesson.**

There is also the possibility that I might ask to schedule an interview with you after you have had a chance to learn the strategy to see if the strategy helped you and if you feel more positive about school and schoolwork. The interview should last about 20-30 minutes.

I will **also** be asking you to complete some short surveys that should take approximately 15-20 minutes to complete to tell about how you see yourself and doing things independently as well as if your teachers allow you choices in your learning. There will be two surveys in the beginning and one at the end of the study. **You can skip any questions you choose to and I will be available to read the surveys to any one who needs the surveys read to him/her.** I will visit your classroom occasionally to make sure your teachers are sticking to the steps for teaching the strategy.

During the interview, if any of the questions make you uncomfortable, you do not have to answer them. We can skip those questions and move on to something else. I would like to record our conversation to make sure I have everything just as you said it. If you are not comfortable with me recording our conversation, I will just take notes. No one will have access to the ipad except for me. However, just in case, I will give everyone a different name during our conversation and then delete our conversation when the study is over. **The Ipad will be password protected and your recording will be saved under a different name. I will delete the audio recordings as soon as I am finished with the project. I will keep the transcriptions in a locked file cabinet in my home for three years and then destroy the transcriptions.**

Your parents have given permission for you to participate. However, you can say "no" to participating and can drop out at any time. Your choice to participate will not affect your grade or your relationship with your teacher, the school, or myself. My role in the school district should have no impact on your decision to

assent and will have no negative consequences to you if you decide not to assent. You can ask questions at any time. If you choose to withdraw, please contact me, Edward Sczesniak, at esczesniak@arcadia.edu or Dr. Christina Ager, the supervisor of the project at 215-572-2115. **You do not need to offer a reason as to why you decided to withdraw.**

Please sign below if you agree to participate in the study and if it is okay for me to record my interview with you.

I would like to participate in the study by allowing data to be collected:

_____
Your Signature

I will participate in the interview if selected: _____
Your Signature

It is okay to record the interview: _____
Your Signature

I will participate in the interview, but prefer not to be recorded. _

_____
Your Signature

Date: _____

Appendix J

Teacher Interview Questions

1. How did the intervention work for your students? What differences did you notice? Did it change how you plan lesions?

2. What were some of the strengths of the intervention? Some of the weaknesses? How useful?

3. What might you have done differently?

4. Do you plan to continue to use self-determination and/or self-monitoring checklists in future lessons? Are these areas you see as benefitting students based on your experience?

Appendix K

Roles and Responsibilities for Participants

Role	<u>*Responsibilities*</u>
Teach and model strategy	Teacher
Complete Self-Monitoring strategy sheet	Student
Provide instructive guidance and reminders on how to complete self-monitoring worksheet	Teacher, Instructional Assistant
Complete assigned work	Student
Data collection for on-task behavior, number of times redirected back to task, and work completion percentage	Instructional Assistant
Hand out or collect Self-Monitoring worksheet	Teacher, Instructional Assistant
Keep participants worksheet after class	Teacher
Deliver worksheets to PI for data entry	Teacher, Instructional Assistant, PI

- **All data collection will occur during the independent practice section of a lesson.**

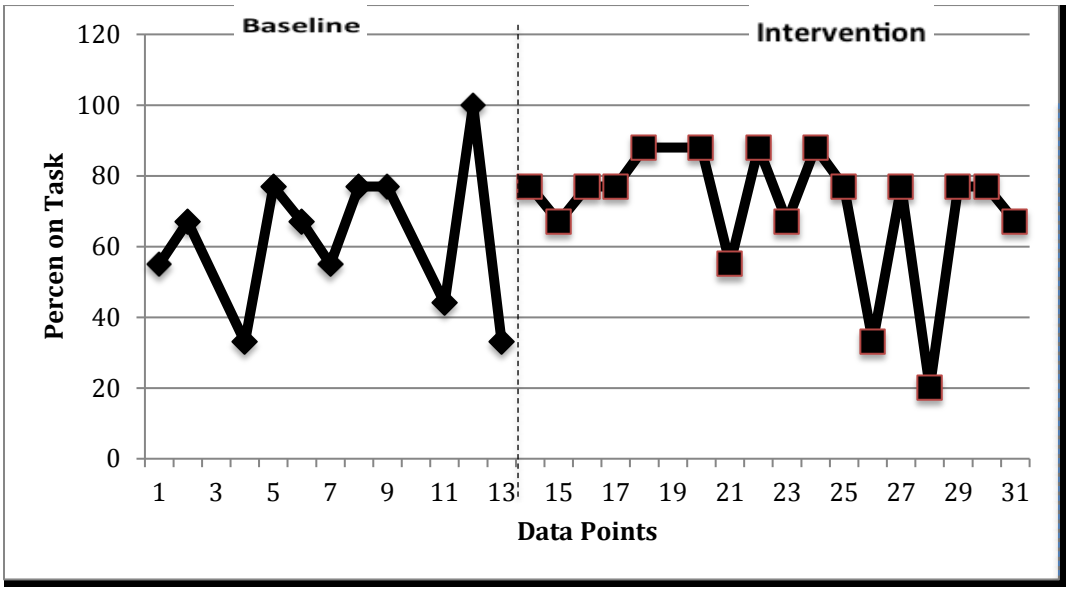
Appendix L

The Instructional Assistant collect operational Definitions of Variables and How Data Will.

Variables	Definitions	Data Collection Method
On-Task	Attending to the speaker by looking at the speaker or performing a behavior that indicates the participant is on-task. Other behaviors considered "on-task" include raising hand to answer question, writing, using classroom and personal materials for the purpose of completing the task.	Every 15s, a student will be recorded as on-task (+) or off-task (-). At the second 15s interval, the next student will be recorded as on or off-task.
Redirections	Any time a teacher or instructional assistant speaks to or uses proximity control in order to re-orient a student back to task.	Frequency count or how many times (i.e. 4 times scored with a slash for each occurrence)
Work Completion	Answering all assigned problems or tasks completely to include showing work if required	Scored as a fraction (i.e. 9/16)

Appendix M: On Task Behavior Science

Amelia



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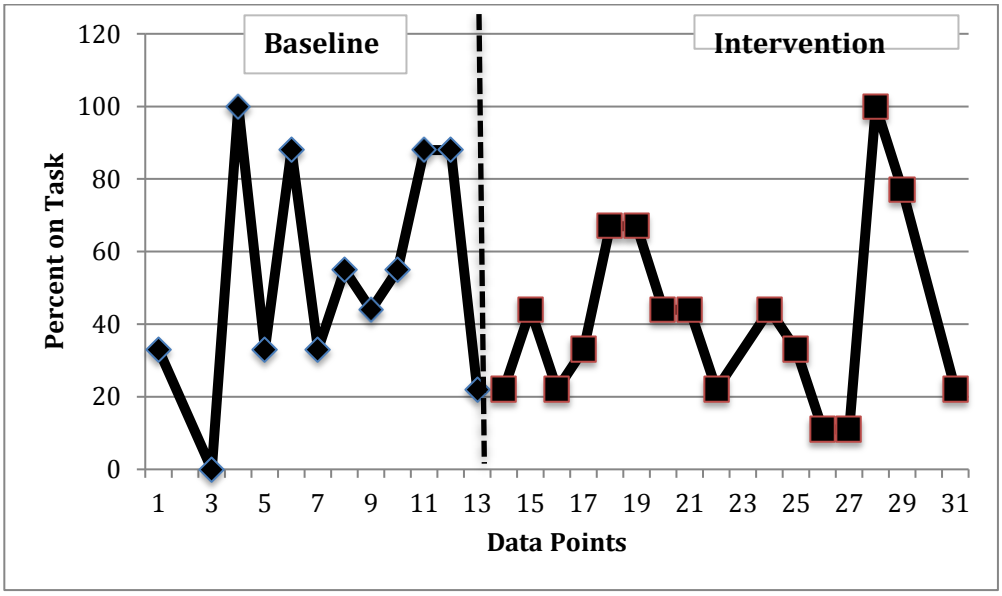

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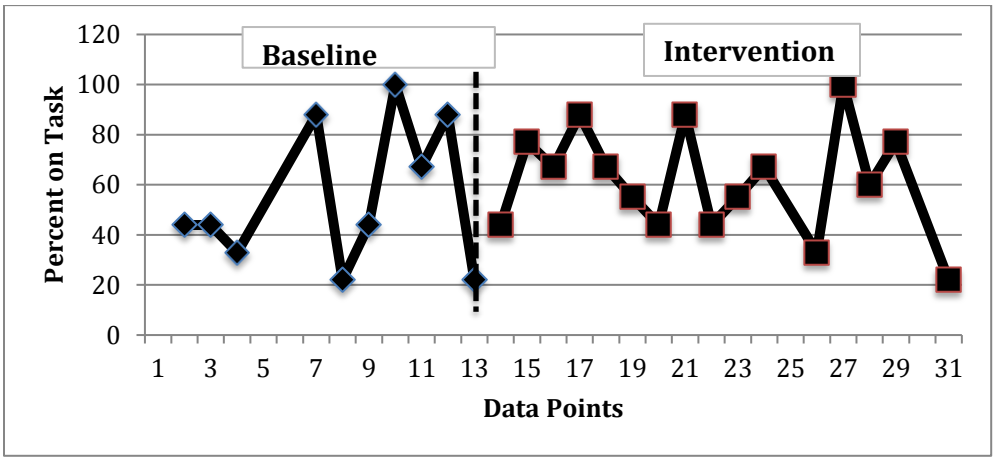

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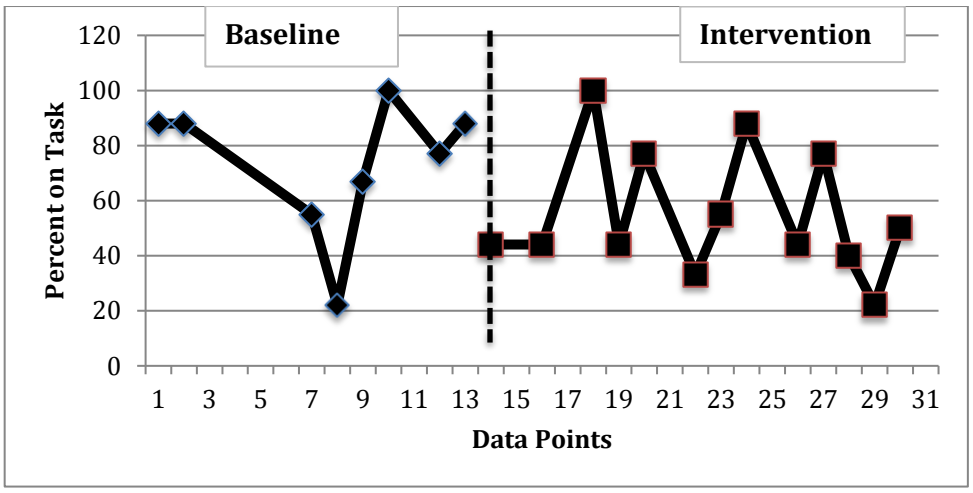
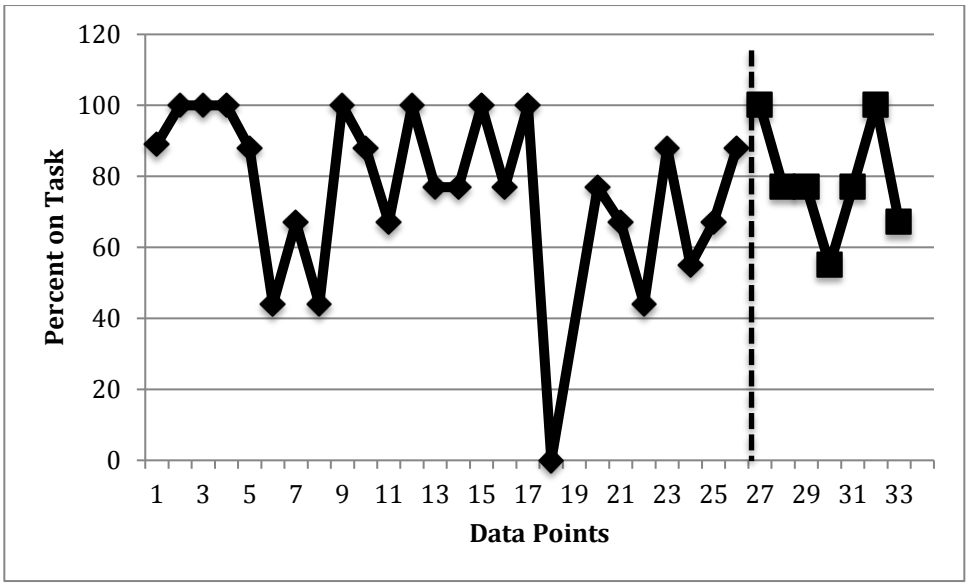


Figure 1: Percentage of time on task for Science Class

Appendix N: On Task English

Amelia



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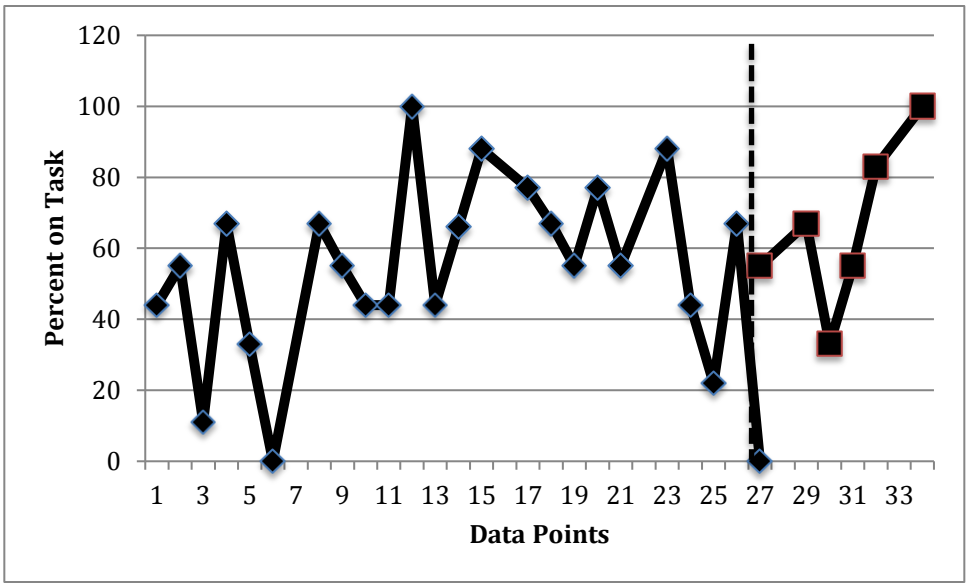

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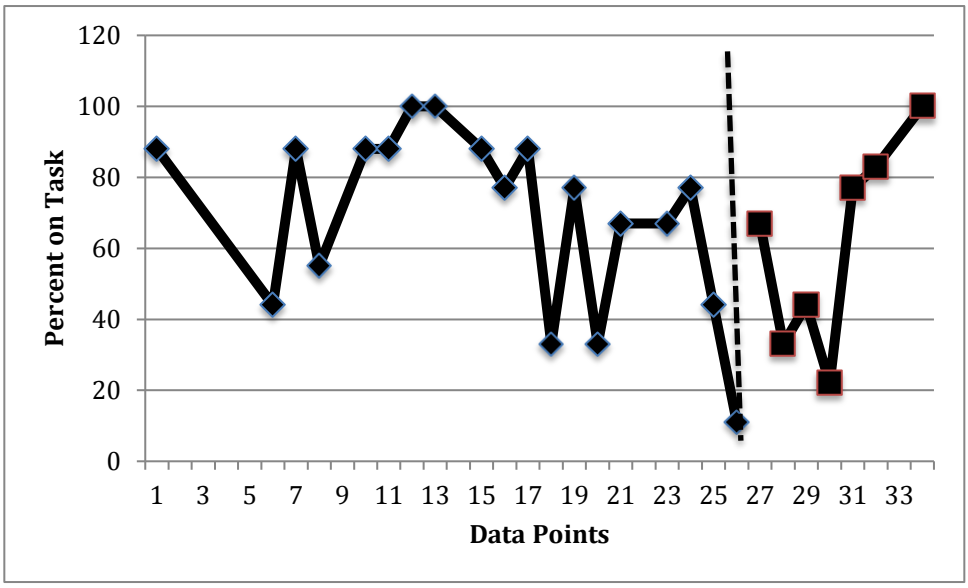

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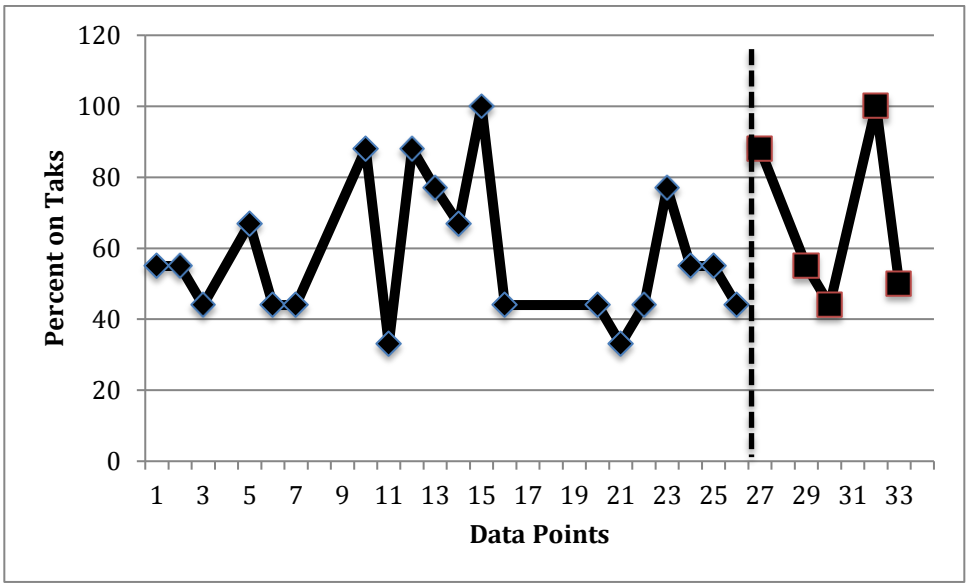
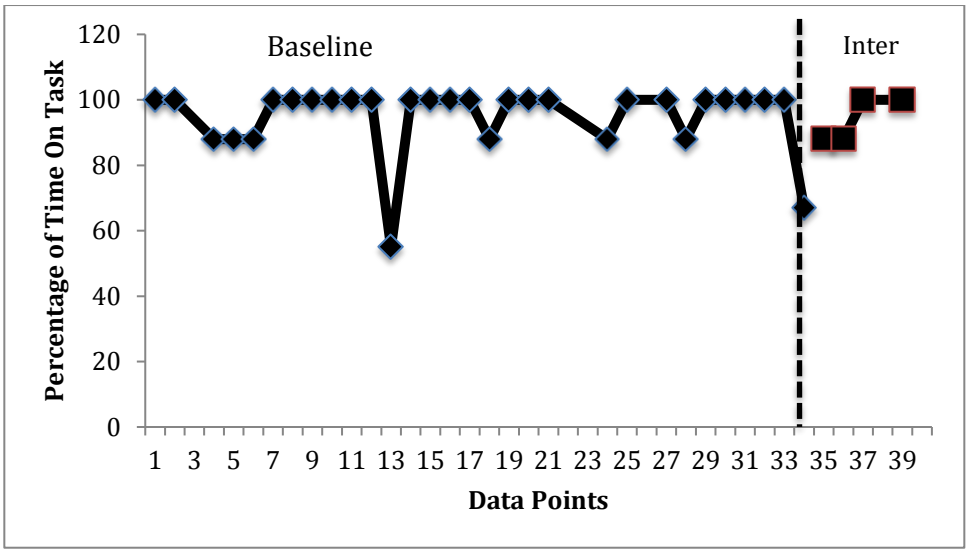


Figure 2: Percentage of time on-task for English class.

Appendix O: Time On-Task for Social Studies Class

Amelia



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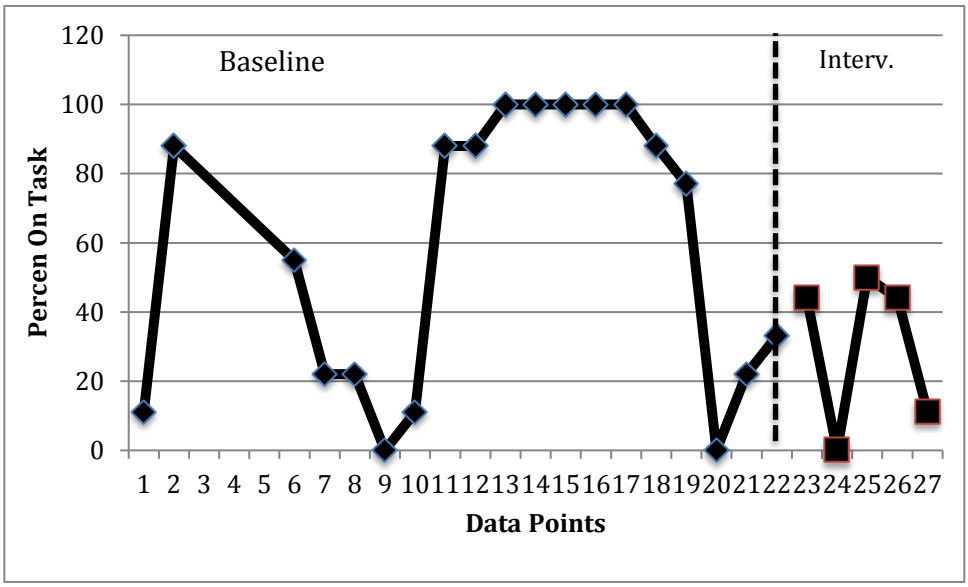

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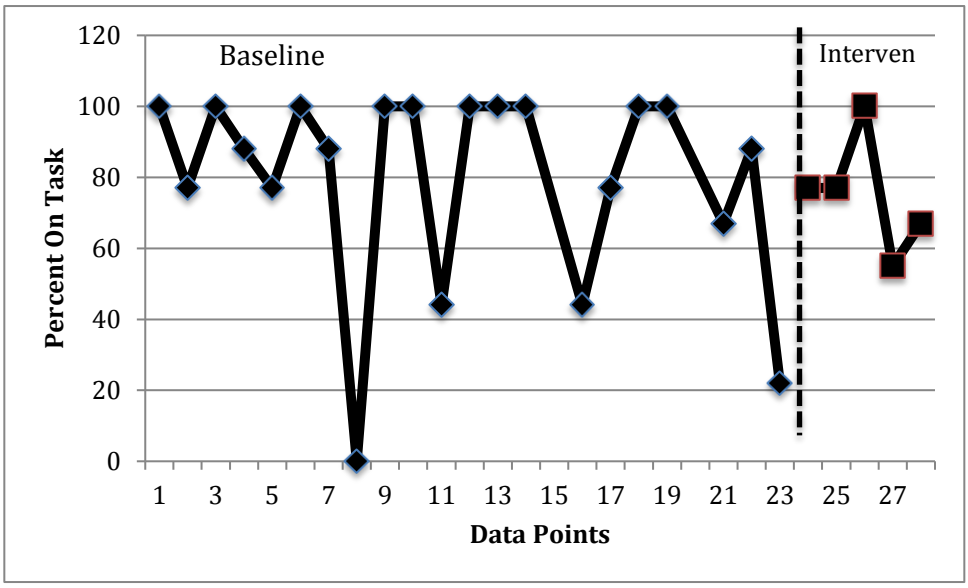

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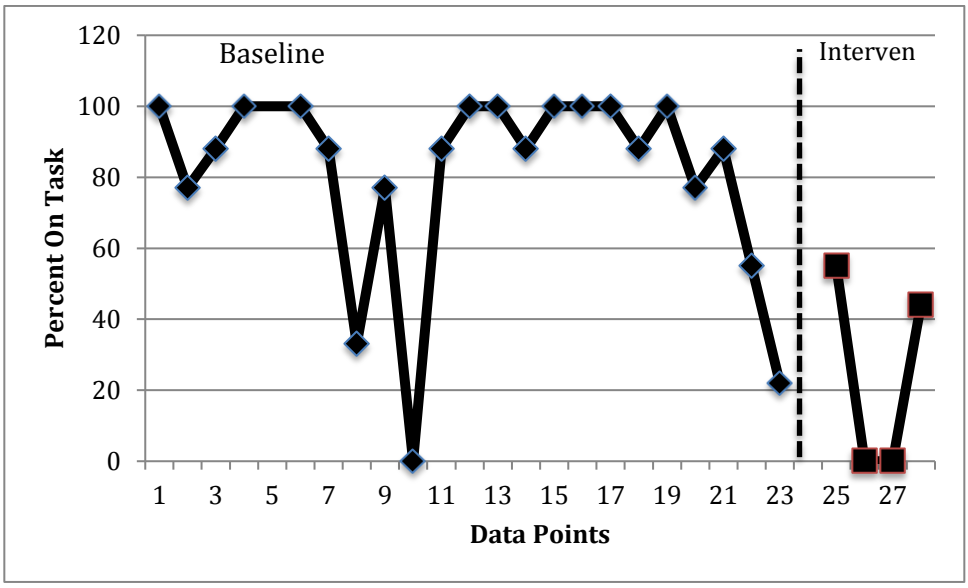
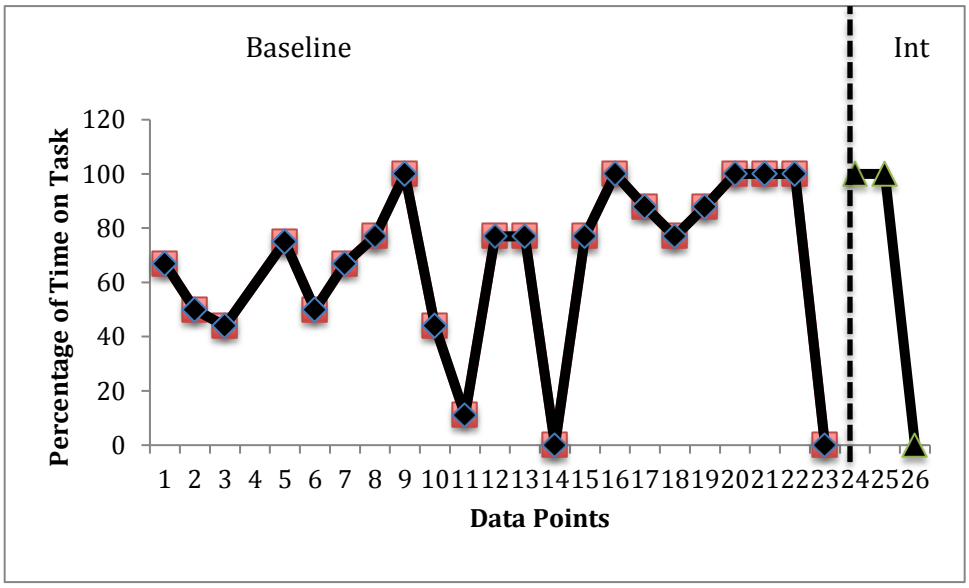


Figure 3: Percent time on-task for Social Studies

Appendix P: Percent Time On-Task for Math Class

Amelia



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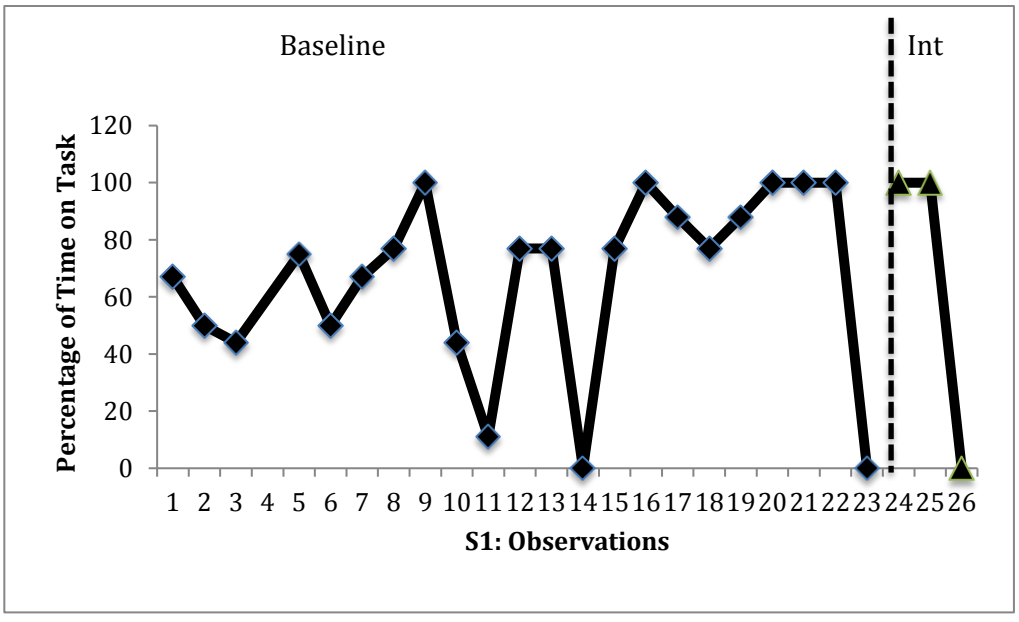

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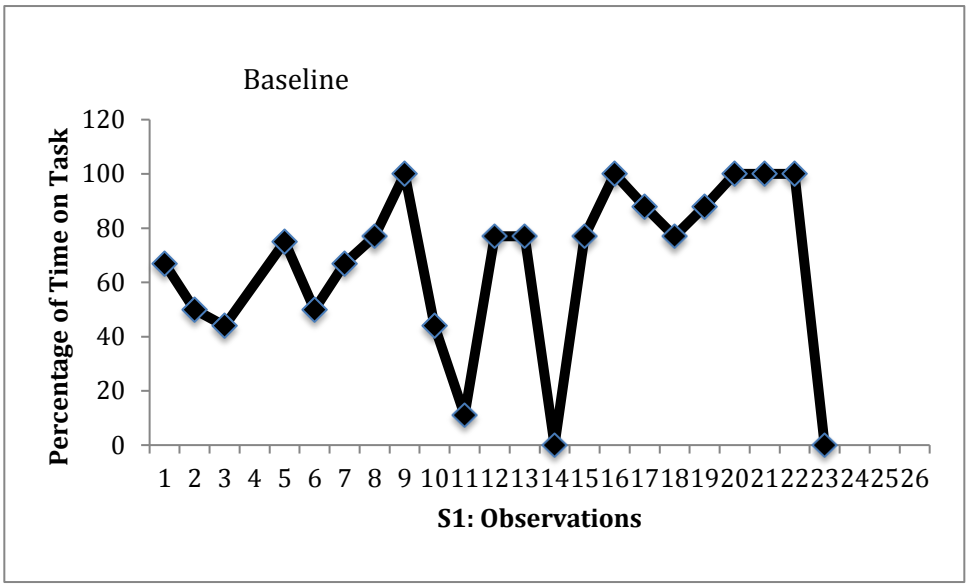

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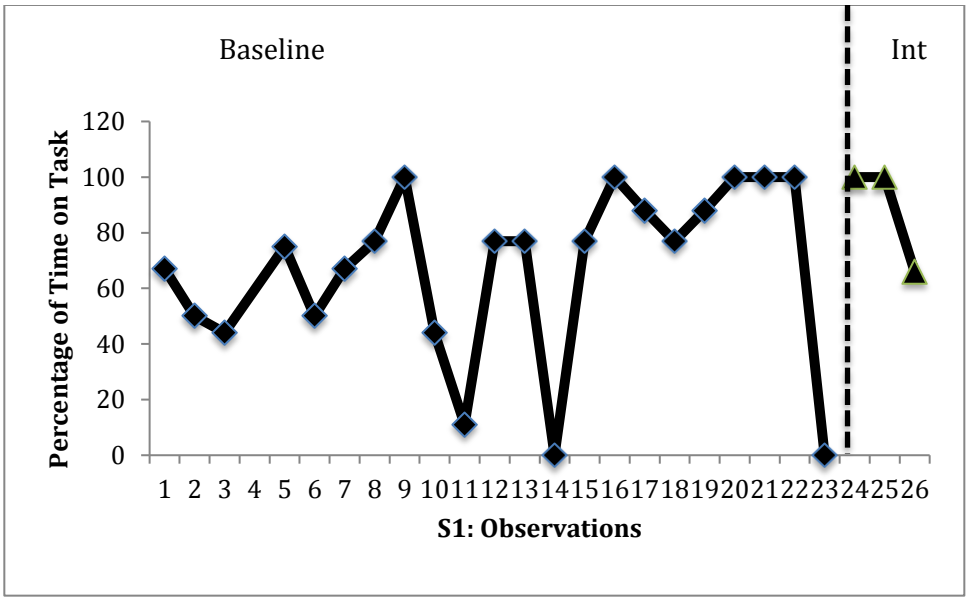
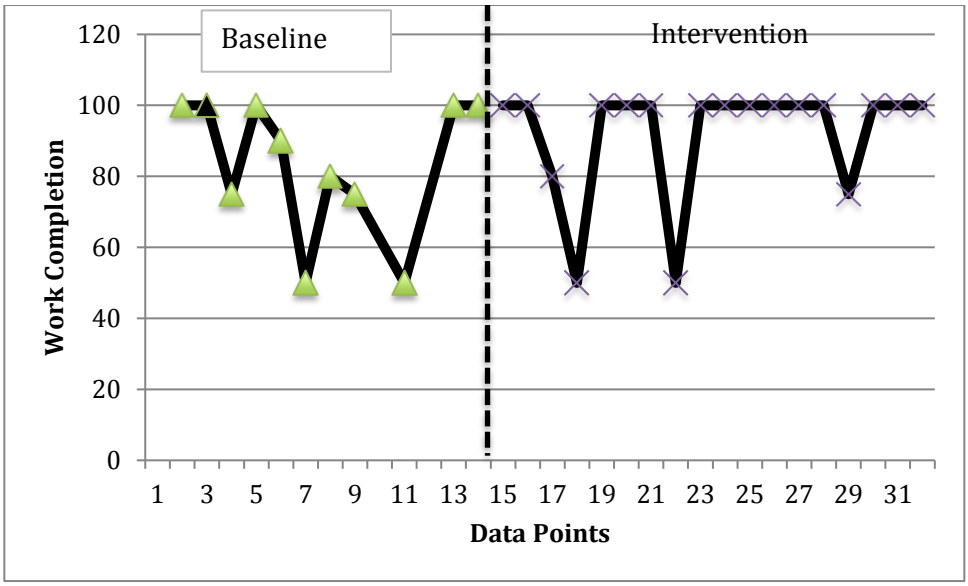


Figure 4: Percent on-task for Math Class

Appendix P: Work Completion for Science Class

Amelia



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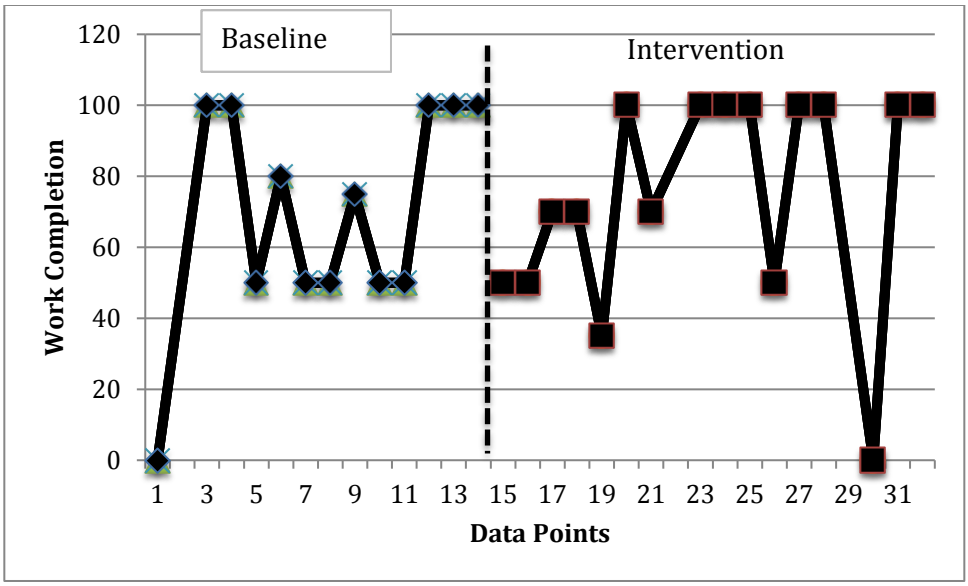

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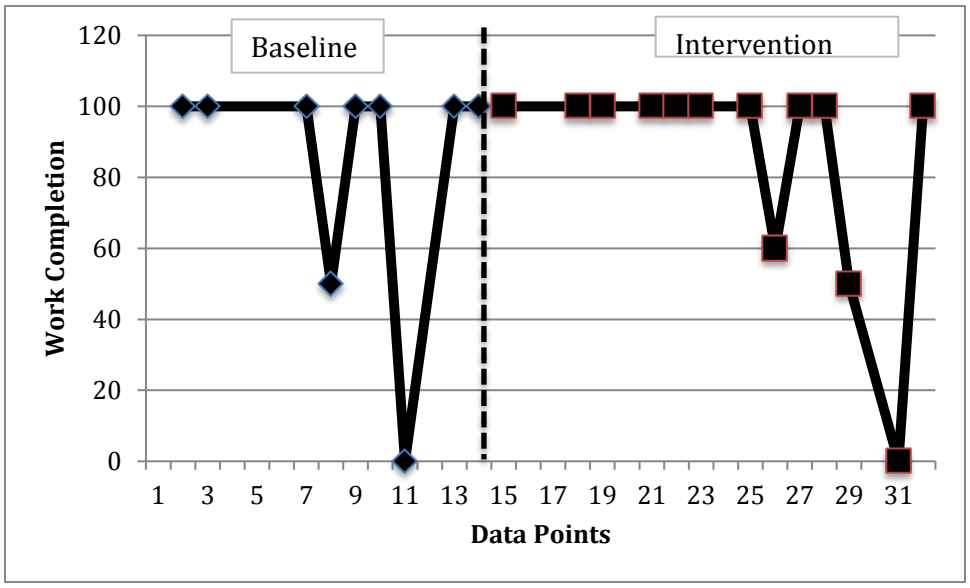

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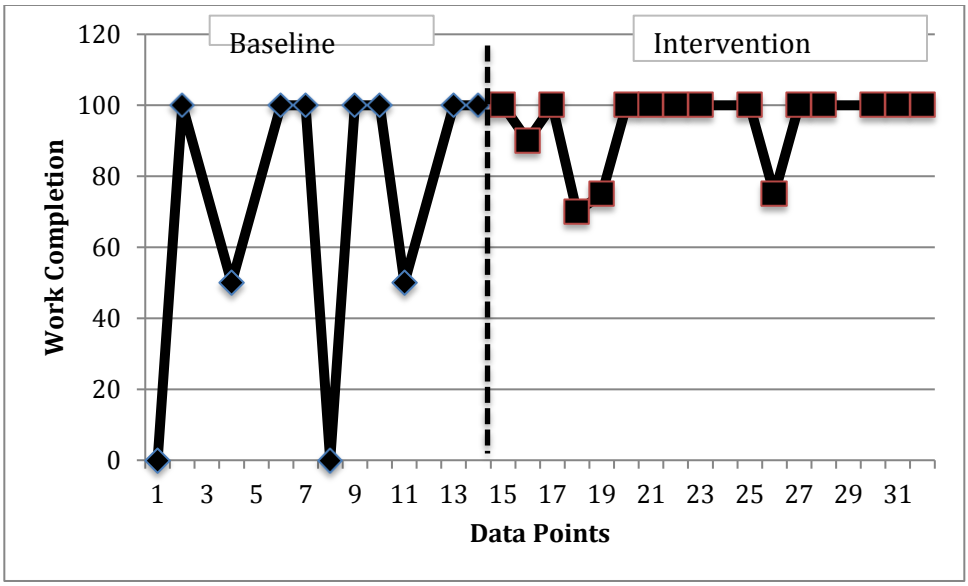
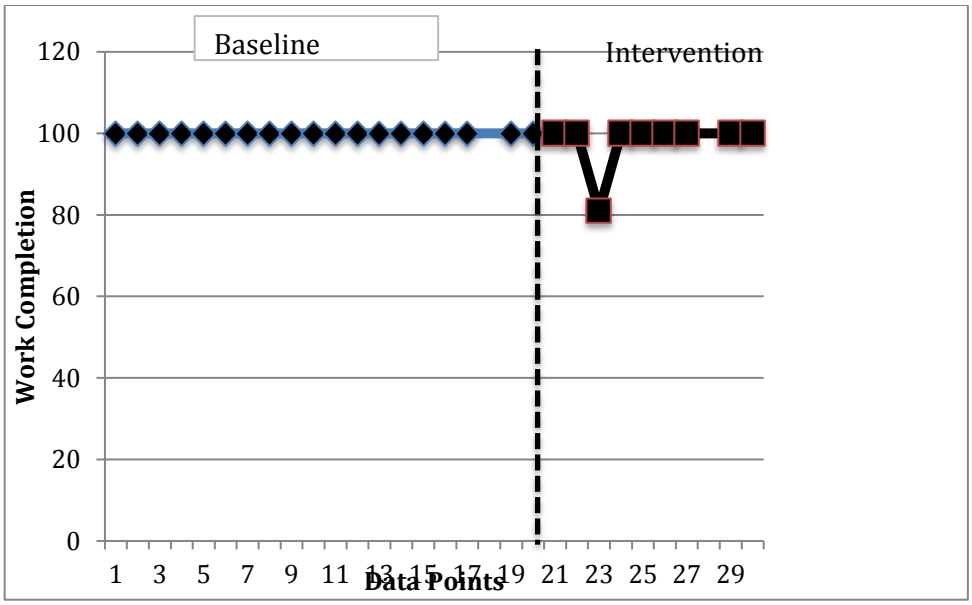


Figure 5: Work Completion for Science Class

Appendix Q: Work Completion for English Class

Amelia



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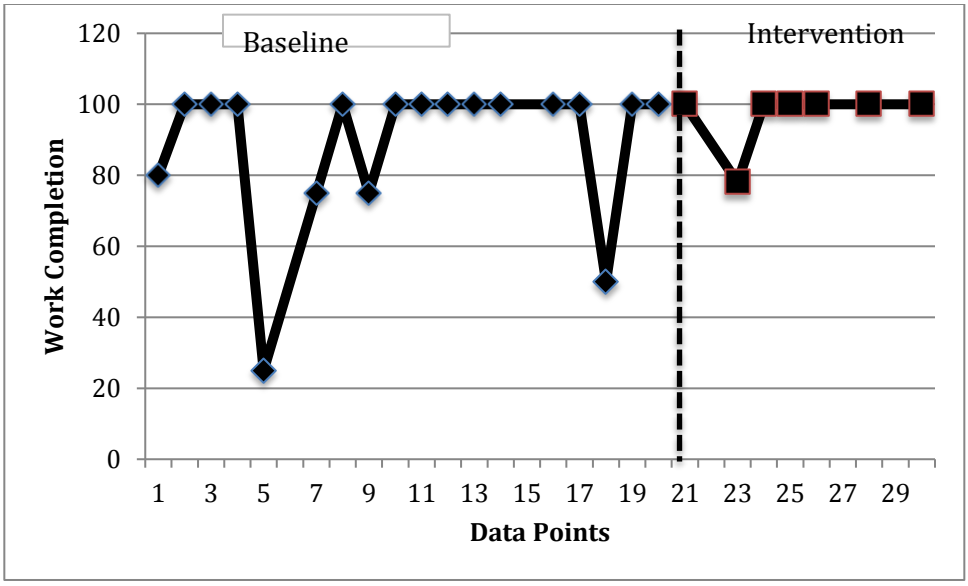

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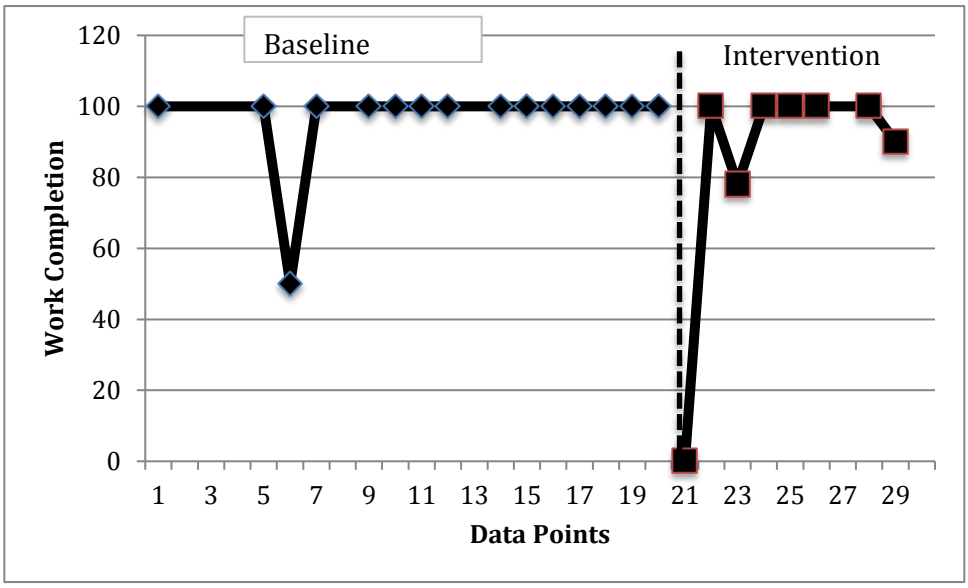

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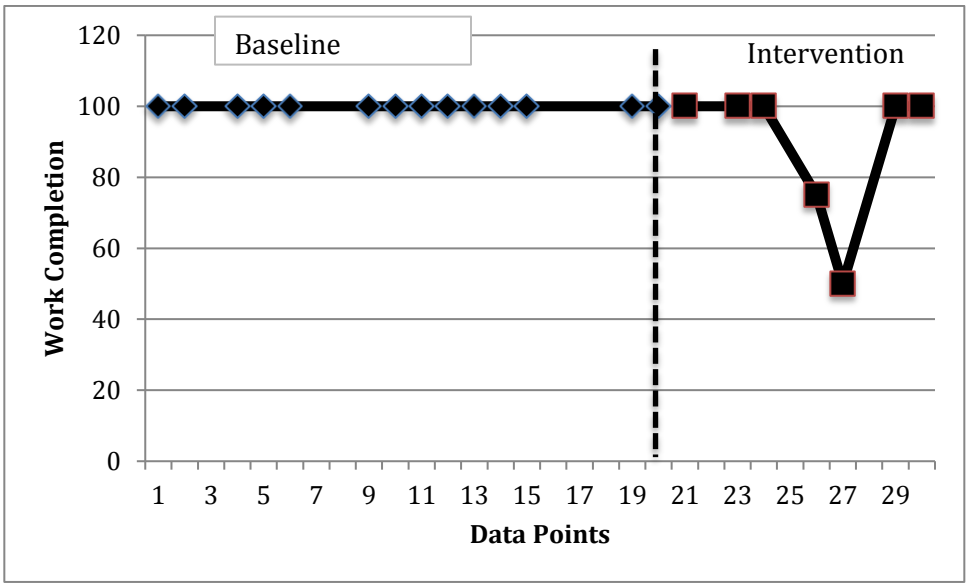
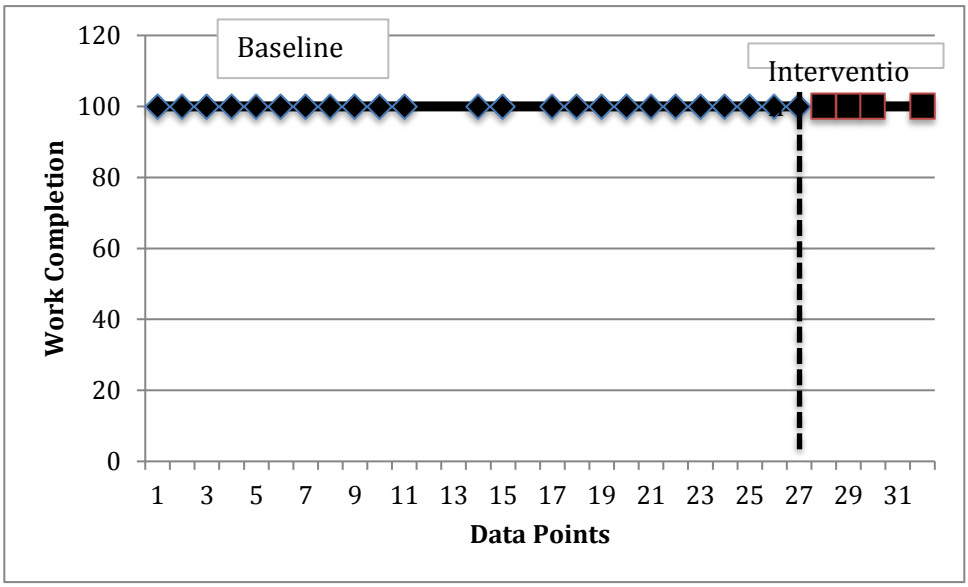


Figure 6: Work Completion for English Class

Appendix R: Work Completion for Social Studies Class

Amelia



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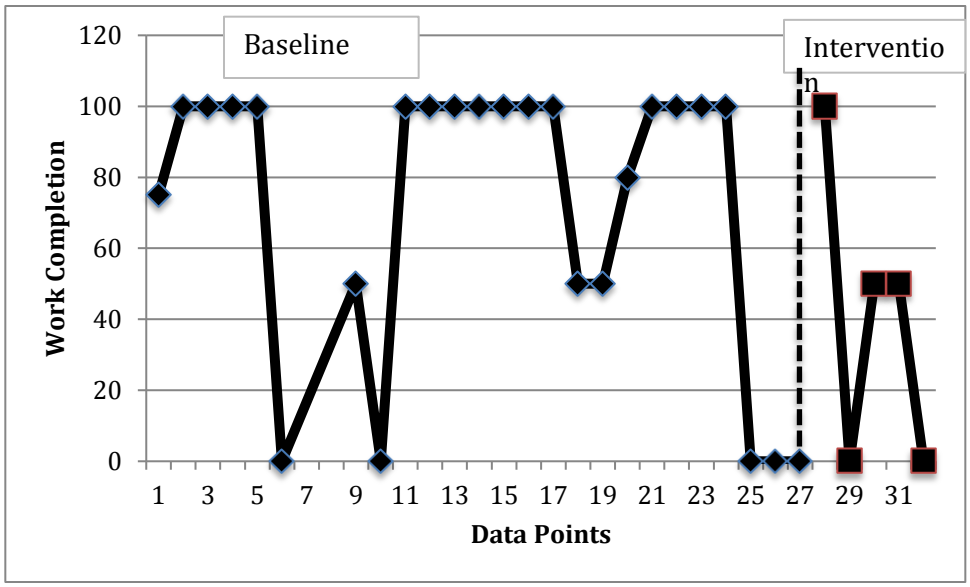

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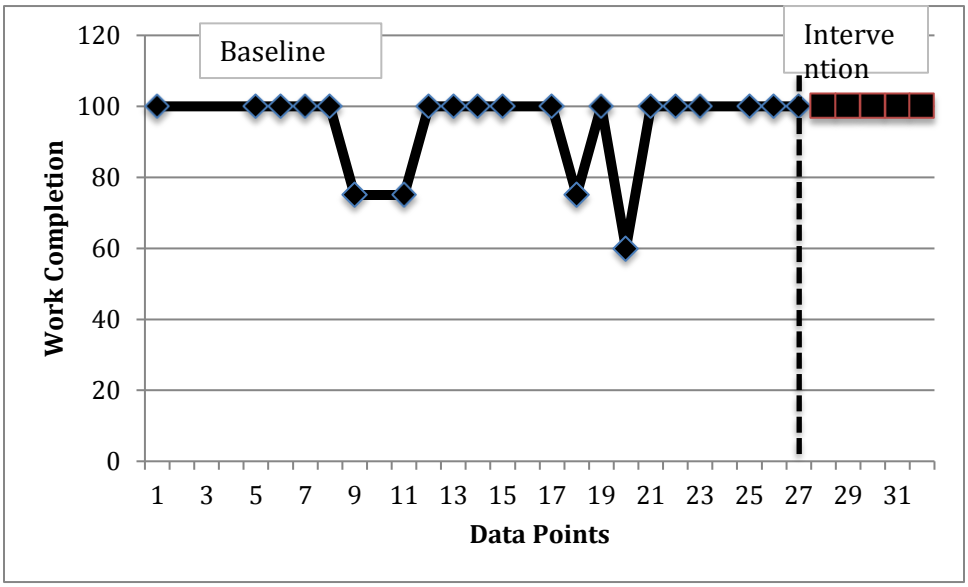

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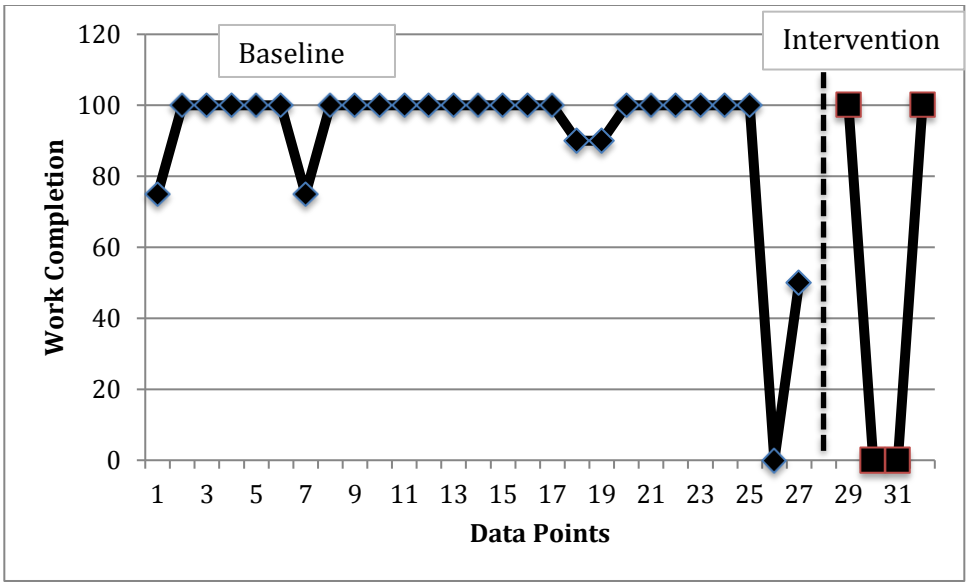
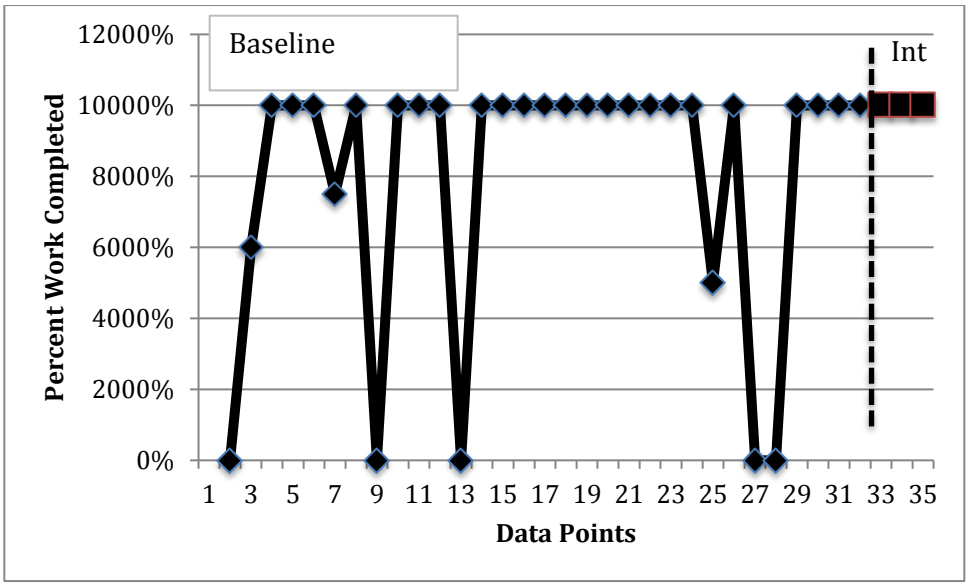


Figure 7: Work completion for Social Studies Class

Appendix S: Work Completion for Math Class

Amelia



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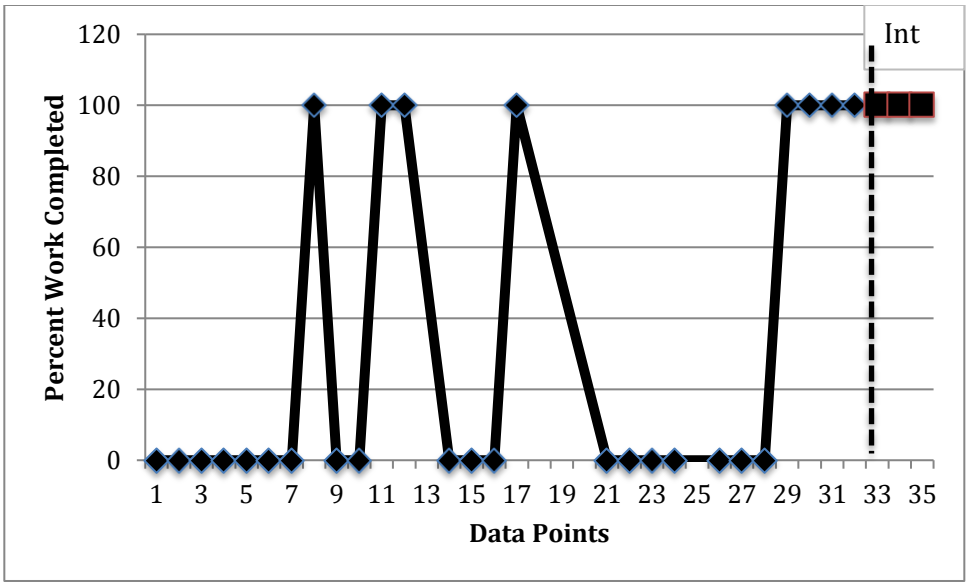

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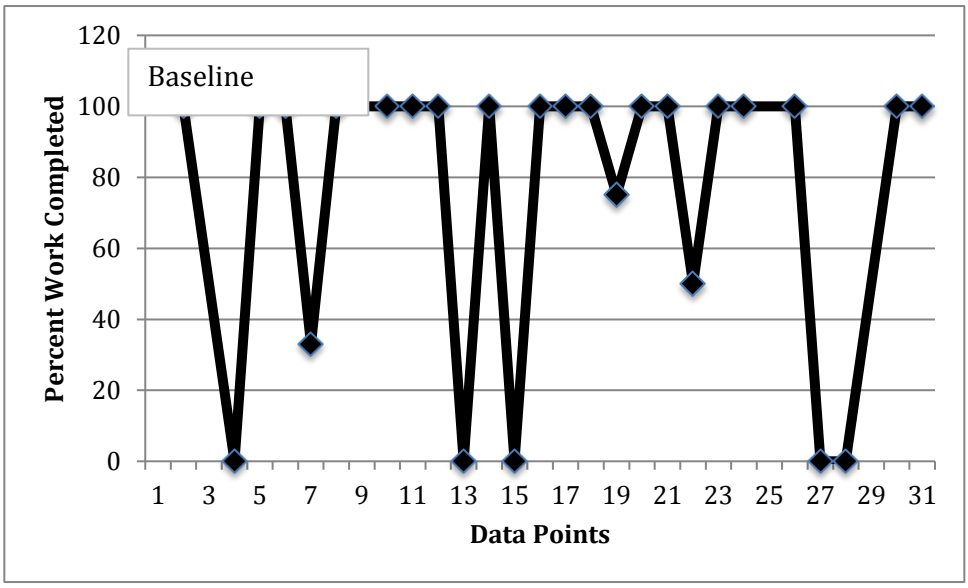

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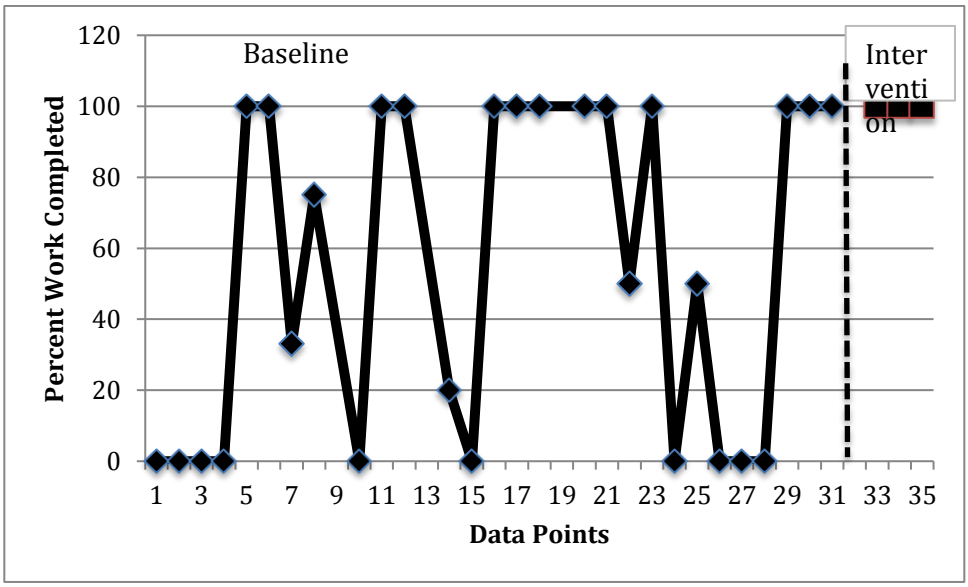
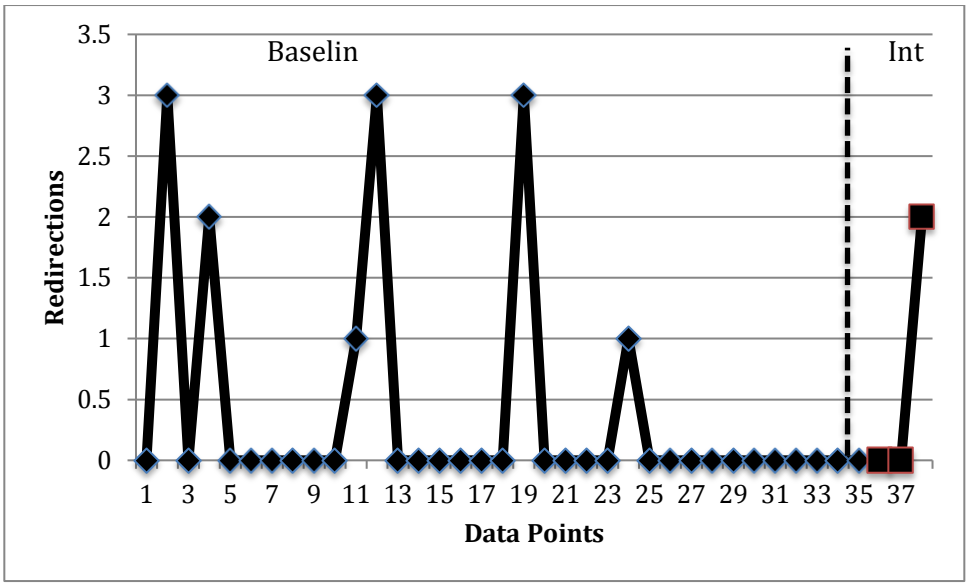


Figure 8: Work completion for Math class

Appendix T: Redirections for Science Class

Amelia



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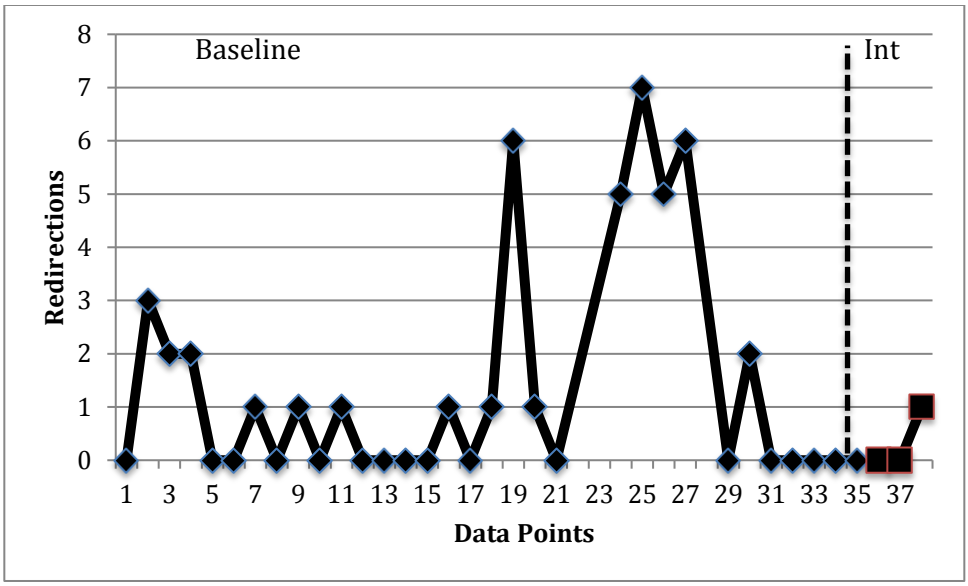


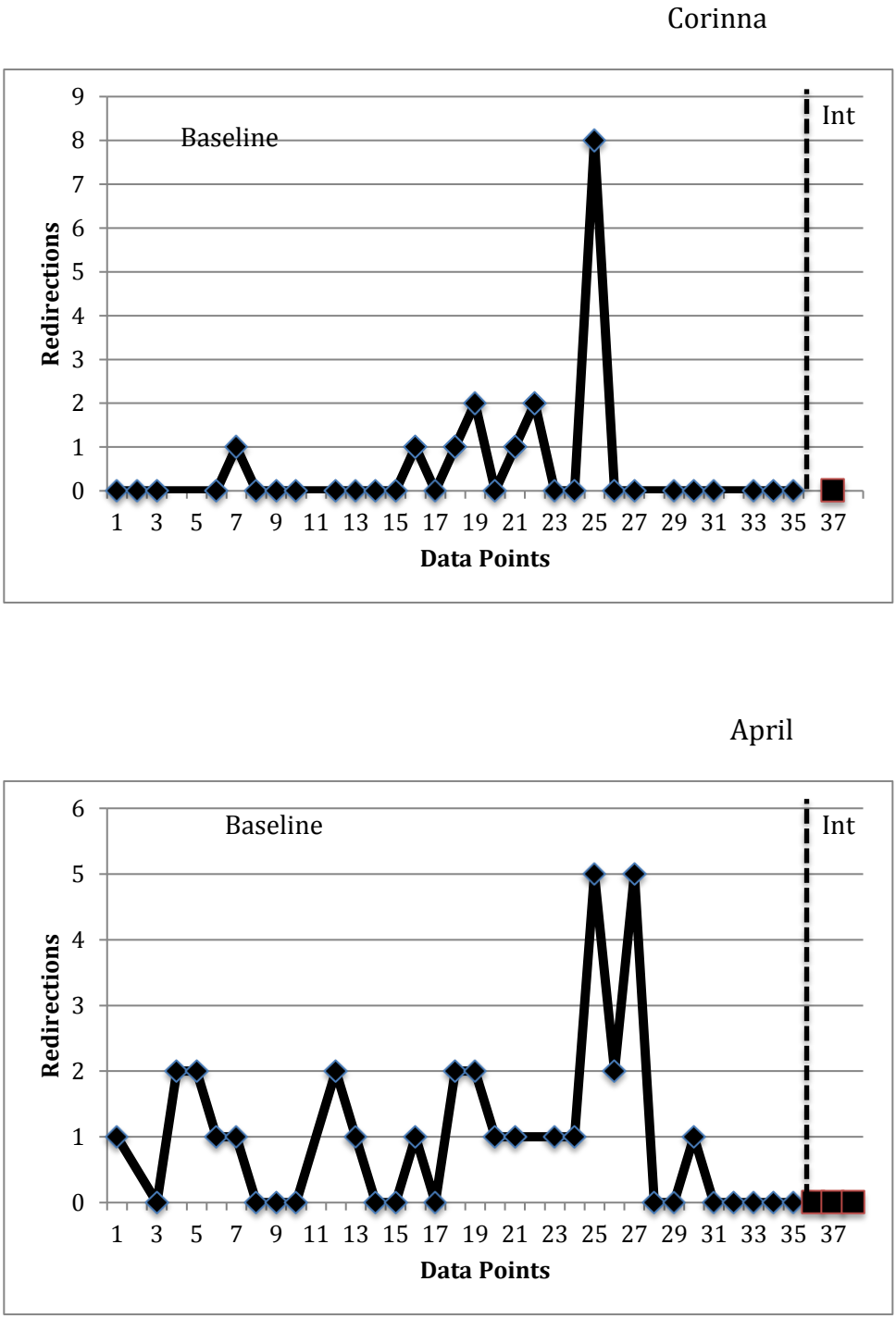
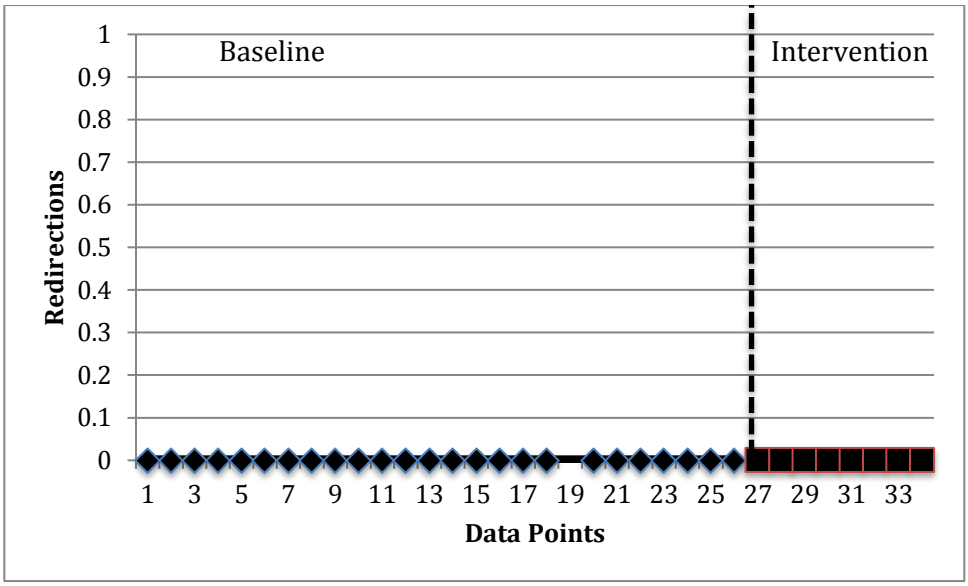


Figure 9: Redirections for Science Class.

Appendix U: Redirections for English Class

Amelia



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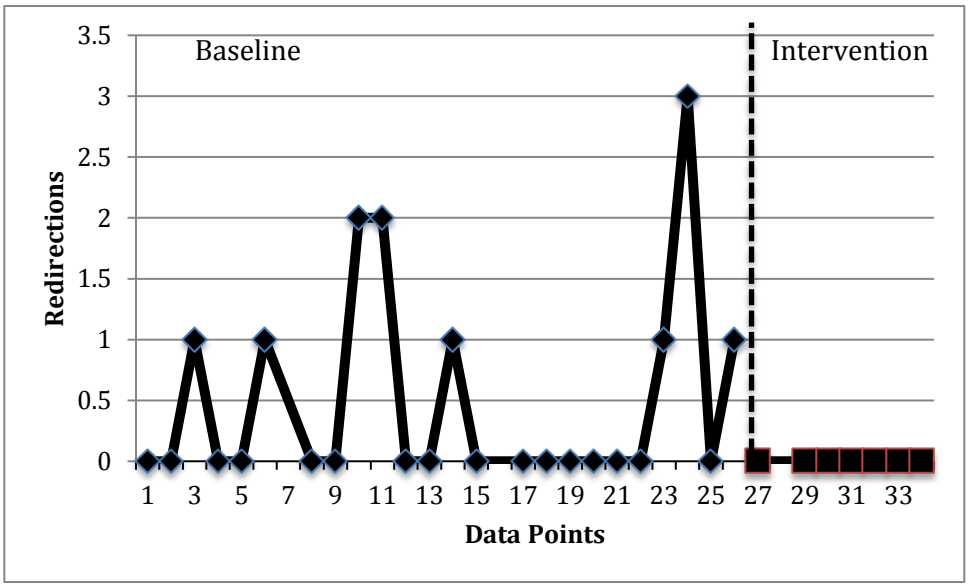

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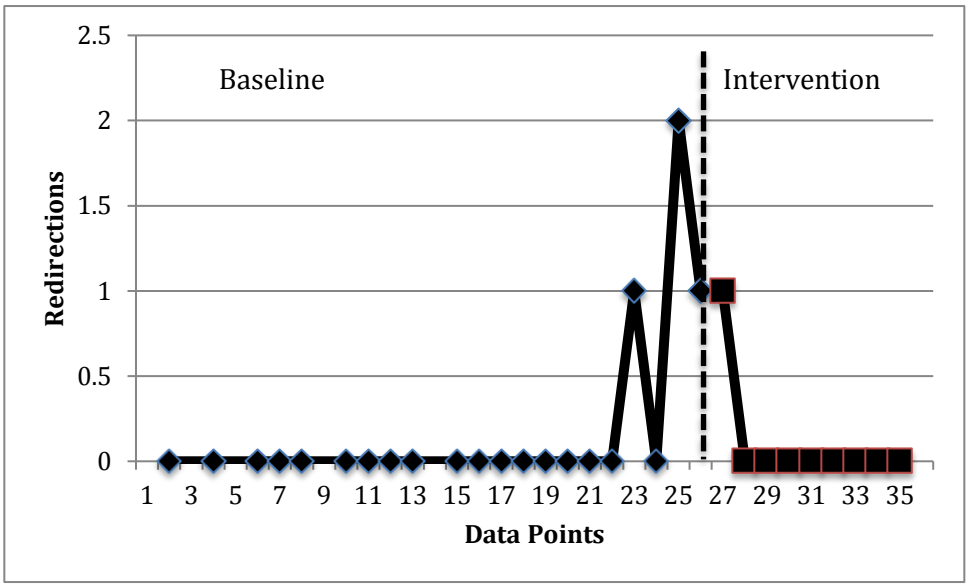

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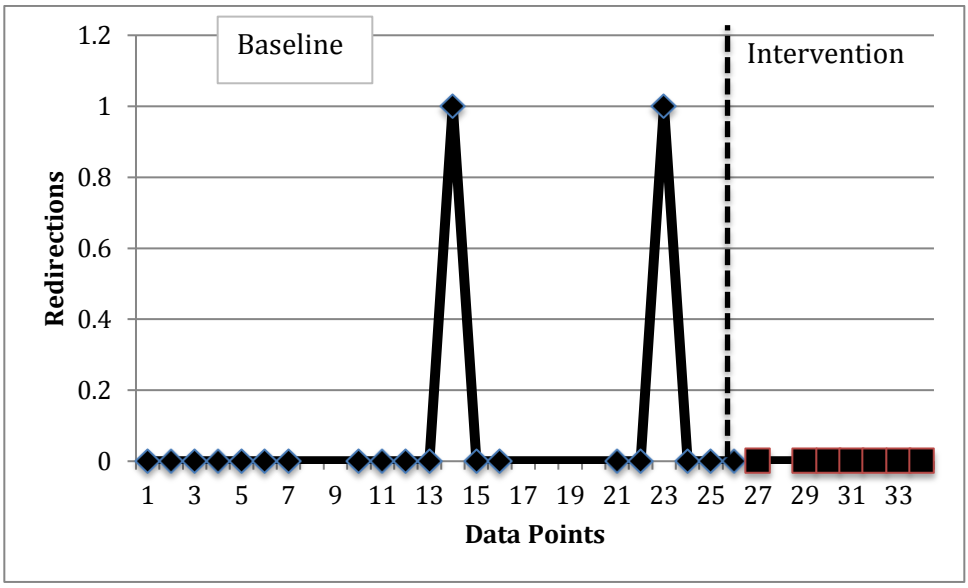
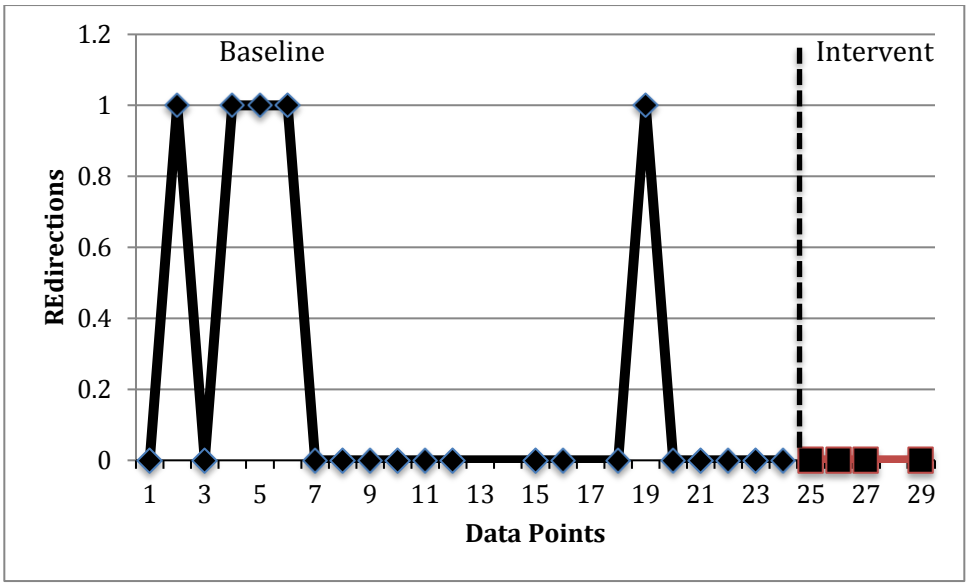


Figure 10: Redirections for English Class

Appendix V: Redirections for Social Studies Class

Amelia



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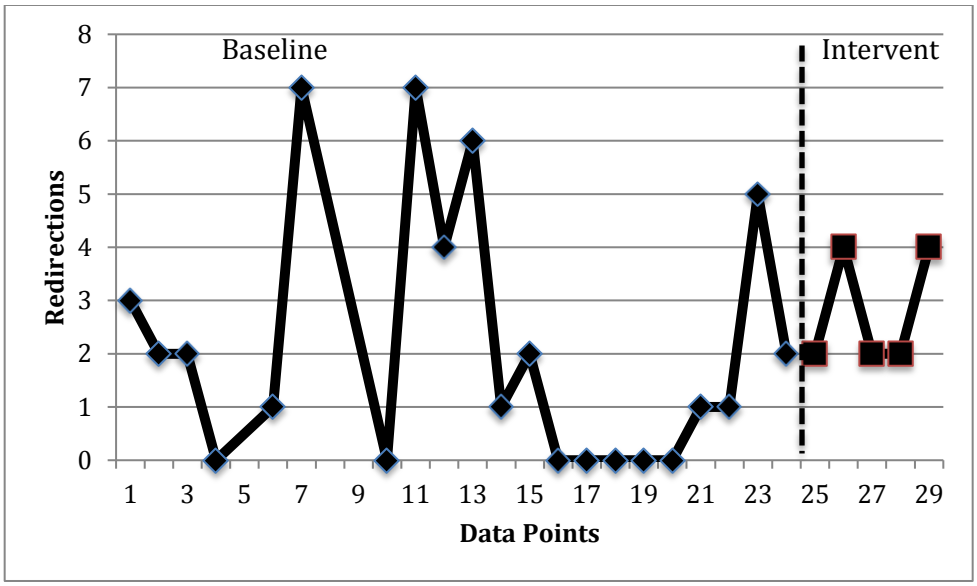

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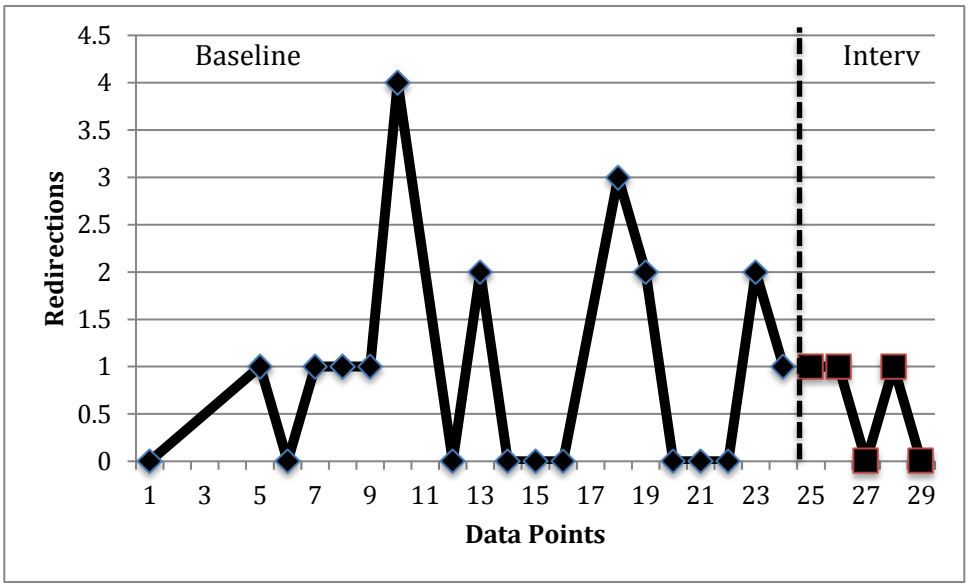

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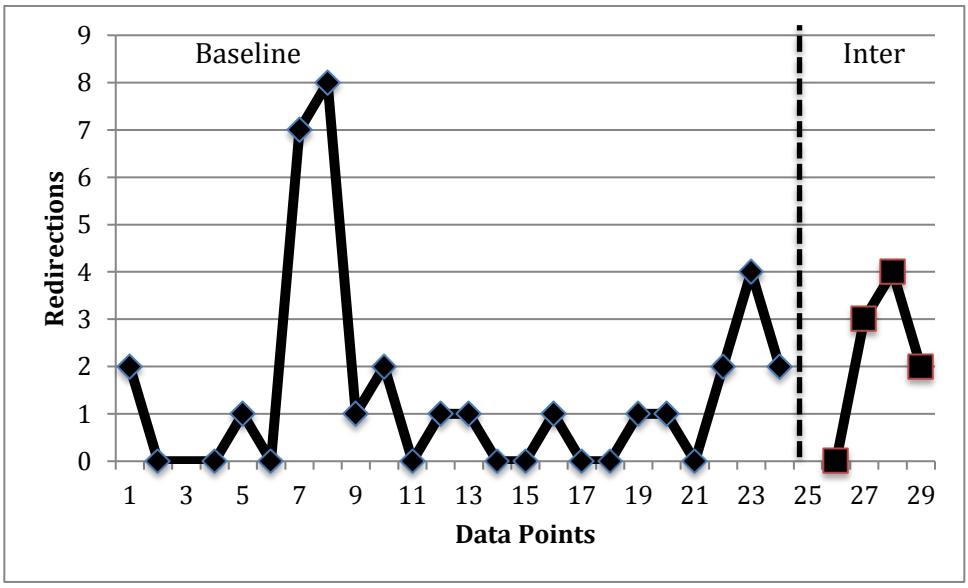
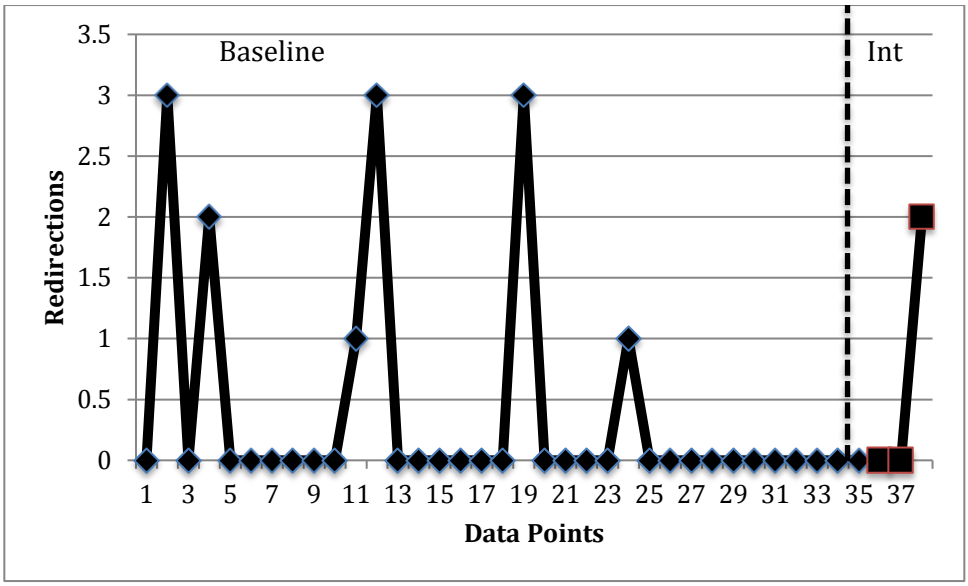


Figure 11: Redirections for Social Studies Class

Appendix W: Redirections in Math Class

Amelia



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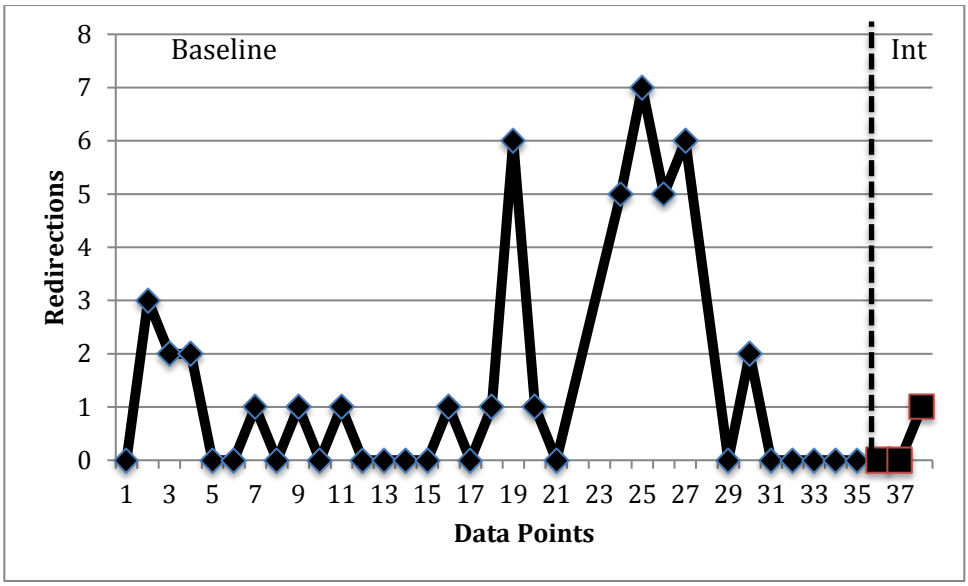

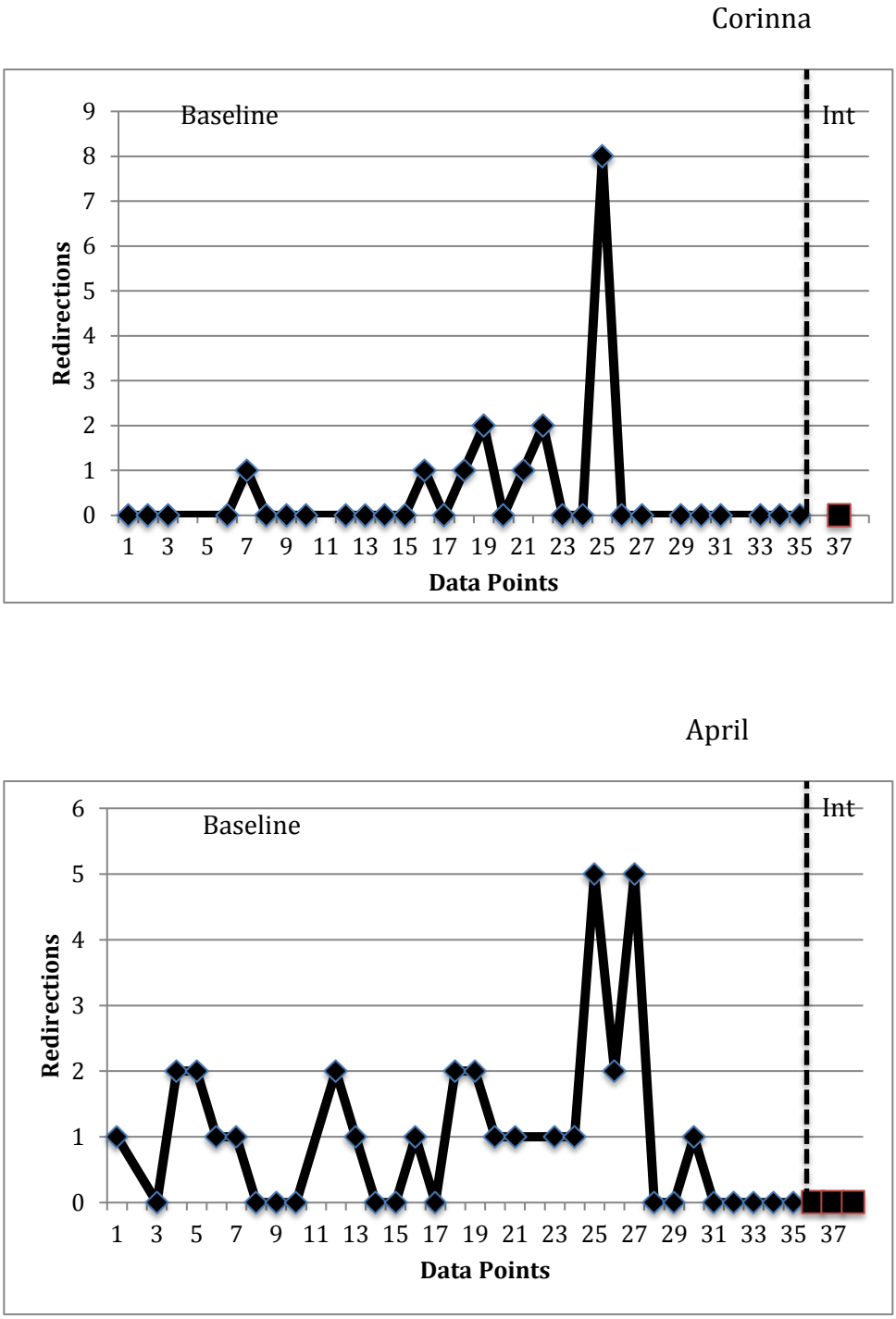

Figure 12: Redirections for Math Class

Appendix X

Transcript of Amelia's Post-Interview

Interview Questions

8. Think about before the strategy. When teachers gave you a task, did you feel that you need a lot of support with planning and finishing assignments? How about now? Do you feel more independent and confident when teachers assign work?

   A- Yes. Now I'm real god with planning. Yes. Like to day I did a lot of make-up work and was planning about how to use my time.
   PI- I'm diverting a little bit because you said, ""planning about how to use my time." This is called a self-monitoring tool so that you could do this on your own. Is this something you would have done before?
   A- I would have just been like not kept my time. Just sit there. I would have been working but then the bell would ring and I would be like 'Oh that's the bell and I only did this much."
   PI-So you were working without an end?
   A- The more I keep time in mind, the more I get done.

9. Tell me about the kinds of goal setting and planning you did before learning the plan, work, adjust, and evaluate strategy.

   A- Not really any.

10. Tell me about how you felt about schoolwork before you learned this strategy? (Did you look forward to learning or was it something you just did because you had to or didn't do much at all? How about now?)

    A- Schoolwork was just like boring. It's kind of weird because now that we do this it's kind of like a game. You want to get as much done as you can.
    PI- You want to get them done or done accurately.
    A- Done accurately. And just like 'cause like when you get work done, they're like good job.

11. Do you do any of this kind of planning in other areas of your life (e.g. at work or at home)?

    A- No. I plan out my days-like if I'm going to do yard work so like what should get done first like pick up sticks or mow the lawn. You pick up sticks first.

12. What are some of the changes in your learning and performance that you saw during the strategy (e.g. work completion, grades, or being more focused on schoolwork)?

    A- Yes. It like made me actually want to do my work.
    PI- Did that translate to anything?
    A- I'm getting all good grades. All A's and B's.
    PI- First and second quarter, all A's and B's.
    A- Yes.

13. What did you like about the strategy? Did you feel that it helped you in any way to be more successful? How?

    A- It kept me mindful. Yes, the more you are mindful about things, the more success you can have.

14. Do you think you'll continue to use this strategy in other classes? Why or why not?

    A-Yes. "Cause I'm big with visual reminders.
PI-If we could continue this, would you be interested?
A-Yes, this helped me out a lot.

Appendix Y

Transcript of Corinna's Post-Interview

Interview Questions

1. *Think about before the strategy. When teachers gave you a task, did you feel that you need a lot of support with planning and finishing assignments? How about now? Do you feel more independent and confident when teachers assign work?*

B- Yes. Cause, when we didn't have the sheet, nobody wanted to do no work or anything and when we got the sheet it was timed so people wanted to beat the time.
PI-So what is it about that sheet?
B-Teachers give you time to begin and end and you plan how many you will complete and number they planned on, they would try to beat that number.
PI- So it made it almost a little competitive?
B-Yes.
PI- Did it make you more independent or confident when you did this?
B- Yes. Before I was rushing through stuff, but now I was reading the questions thoroughly and actually answered it.
PI It helped you focus and the focus allowed you to complete more work?
B- Yes

2. *Tell me about the kinds of goal setting and planning you did before learning the plan, work, adjust, and evaluate strategy.*

B-Yes, I was trying to get honors and last year I didn't like Biology. I had a hard time with Biology. Like I did really bad and was close to failing the grade. This year I got A's B's for Biology for the first time.
PI- You did say you goal-set before, but wasn't so successful. Did this help?
B-Yes, before I couldn't communicate with the teachers to get help, but with this I was able to ask questions.
PI- I'm going to infer. So this sheet helped you communicate with teachers?
B- Yes. Communicating with teachers.

3. *Tell me about how you felt about schoolwork before you learned this strategy? (Did you look forward to learning or was it something you just did because you had to or didn't do much at all? How about now?)*

B-Schoolwork was boring and I did it because I had to do it. But this made it like a game and you wanted to beat what you did

4. *Do you do any of this kind of planning in other areas of your life (e.g. at work or at home)?*

B- I had a job but kind of quite. At home, I have this goal I made with my mom. I used to go in my room all the time and shut myself out from my family. There's a lot of drama in my family so I just shut them out. I made this plan with my mom to try to come out and spend more time with my family.

5. *What are some of the changes in your learning and performance that you saw during the strategy (e.g. work completion, grades, or being more focused on schoolwork)?*

   B- Before this I missed honor roll. I had A.s, B/s, and one C. When we started this I got proficient honors. Got all A's and B's. I am hoping to get proficient honors again this marking period.
   PI-What do you attribute it to? Honor Roll? To This?
   B-Ever since we started this, I've been getting proficient honors.

6. *What did you like about the strategy? Did you feel that it helped you in Anyway to be more successful? How?*

   B- It's kind of like a game for me, but it's work. It's a game to me. I like that type of competition.

7. *Do you think you'll continue to use this strategy in other classes? Why or why not?*

B- Yes
PI-If we took this away…?
B- I'd probably go back to getting B's and C's.
PI- But could you design it yourself?
B- Yes.
PI- Would you?
B- Probably,
PI Why?
B- it would because it helped me improve my grades helped me communicate with teachers because I read questions more carefully. I participate in class now.

Appendix Z

Transcript of April's Post-Interview

Interview Questions

1. Think about before the strategy. When teachers gave you a task, did you feel that you need a lot of support with planning and finishing assignments? How about now? Do you feel more independent and confident when teachers assign work?

G-No. No. Independent. Oh, Confident.
PI- Why do you say that?
G- *Confident, like I'm confident*
PI-*More confident? Why?*
G- *It's easier for me because once I'm instructed on what I need to do to do it myself. And I am independent on what I need to do so it's a mixture of independent and confident*

2. Tell me about the kinds of goal setting and planning you did before learning the plan, work, adjust, and evaluate strategy.

G-I sort of did, but never wrote them down. I would set foals for myself and it was better for me to write them down so that helped me.

3. Tell me about how you felt about schoolwork before you learned this strategy? (Did you look forward to learning or was it something you just did because you had to or didn't do much at all? How about now?)

PI- How did you feel about schoolwork before the strategy?
G-I was okay with it.
PI-How about after the strategy? The same, better, or worse?
G- A little better. I had it in front of me. Having a time set out. I have to finish this before a certain time. I found it easier to accomplish. I like going a little above my goal.
G-I was exceeding goal. If I was meeting it, than I was exceeding.
PI- Was that easy for you?
G –Yes

4. Do you do any of this kind of planning in other areas of your life (e.g. at work or at home)?

G- I plan stuff out, but just never really wrote it down.

5. What are some of the changes in your learning and performance that you saw during the strategy (e.g. work completion, grades, or being more focused on schoolwork)?

   G- Yes. Saw that I was able to finish work on time and faster. Yes. Much faster.
   PI- Grades?
   G- No, not really.
   PI- The amount?
   G- Greater

6. What did you like about the strategy? Did you feel that it helped you in any way to be more successful? How?

   G- I had stuff set out for me. Before I would do my work, I would have this done so I could reach my goals?
   G- Yes.
   PI- Other people used the word "focus."
   G- I think it was about the timing because if you were just writing down things down like you have to finish this worksheet. Like we have to finish by 10 o'clock

7. Do you think you'll continue to use this strategy in other classes? Why or why not?

   G- Yes. If it was set out for me I would. I wouldn't do it on my own. I just don't think I would do it first.
   PI-If we were able to continue with this next year, would you be interested?
   G- Yes.
   PI- A couple people said they'd like it
   G- It helps.

Appendix AA

Transcript of Claudia's Post-Interview

Interview Questions

1. *Think about before the strategy. When teachers gave you a task, did you feel that you need a lot of support with planning and finishing assignments?*

D- I never really did the assignments, but after I did this I started doing them because I really knew what I had to do and I was right in front of me.

PI: How about now?
D- I do it now. It gives me a time limit and expectations for myself. And like when you see the numbers what I expect and what I really get, you want to go above and beyond what you write.

PI- So just writing those numbers down helps you?
D- Yes.

PI- Do you feel more independent and confident when teachers assign work?
D- Yes.
PI-Why?
D- The papers make me… In the beginning I was doing only about 5 problems. Now I'm trying to surpass what I thought of myself.

2. *Tell me about the kinds of goal setting and planning you did before learning the plan, work, adjust, and evaluate strategy.*

D- I did. I don't sleep anymore in class.
PU- No, I mean before we did the strategy.
D- Right. I used to sleep all the time But now I don't. It was a big no-no. Now I made a goal, planned it out, I did the steps to it and followed the steps, I achieved the goal I wanted.

3. *Tell me about how you felt about schoolwork before you learned this strategy? (Did you look forward to learning or was it something you just did because you had to or didn't do much at all? How about now?)*

D- I hate schoolwork. Now I still dislike it, but it gives me purpose to see I'm improving. Not enough though. I'm still failing.
PI- Are you failing the in classes we did the strategy.
D- No.

PI- What if we did this in the other classes.
D- I'd pass those classes.
PI-You think it helped you that much?
D- Yes-except for Teacher X. (sighs)

4. *Do you do any of this kind of planning in other areas of your life (e.g. at work or at home)?*

   D- I can't. When I have to do it myself, it's difficult. When you give me a sheet to plan out work, I can do that, but to plan out my life? No.

5. *What are some of the changes in your learning and performance that you saw during the strategy (e.g. work completion, grades, or being more focused on schoolwork)?*

   D- I complete more of the work. I'm more focused than I was. I used to get very sidetracked, but now not so much.
   PI- Have you seen a change in your grades?
   D- I don't know. Looking at my grades scares me so I try not too.
   PI- Do you think if you checked your grades more frequently like we used the strategy

6. What did you like about the strategy? Did you feel that it helped you in any way to be more successful? How?

   D- It was upfront.
   PI- What does that mean?
   Because when a teacher tells you what to do verbally your just like okay I don't want to listen, but when they put the paper in front of you and she explains it and it's right in front of your face what you have to do instead of trying to figure out what you have to do…
   PI- So knowing how much work you have to do and how much time you have to do it along with having a visual aide helped you?
   D- Yes.
   PI- How has it helped you.
   D- I'm less. No, not less crazy (laughs). I'm less all over the place, more focused and centered.

7. Do you think you'll continue to use this strategy in other classes? Why or why not?

   D- Yes.

PI- If I gave you this in your other classes, you'd use it? Could you do it yourself?
D- Yes.
PI- Should we continue next year?
D- Yes.
PI- Why?
D- For me, it helps me focus. I don't know about other people, but I have a hard time focusing and keeping my mind steady.
PI- Are you connecting your ability to focus on a lesson with your performance in school?
D- My whole problem is focus and this helps me focus on one question at a time not looking at the phone or my nails. I'm focused on one thing.

Appendix BB

Table 1: Percentage of On-Task Behaviors

Student	Content	Baseline	Intervention
Amelia	Science	62.27	70
	English	76.16	78.67
	Social Studies	92.04	94
	Math	70	67
Claudia	Science	50	37.65
	English	55.20	60.90
	Social Studies	67	27.50
	Math	30.09	67
Corinna	Science	73.13	56.07
	English	69.10	58.75
	Social Studies	72.40	75.20
	Math		
April	Science	55.20	56.80
	English	61.25	68.70
	Social Studies	76.70	24.75
	Math	51.73	88.67

Appendix CC

Table 2: Median Percent On-Task

Student		Baseline	Intervention
Amelia	Science	67	77
	English	88	77
	Social Studies	100	94
	Math	77	67
Claudia	Science	44	44
	English	55	61
	Social Studies	67	44
	Math	22	100
Corinna	Science	77	49.5
	English	77	55.5
	Social Studies	88	77
	Math		
April	Science	44	67
	English	55	67
	Social Studies	88	22
	Math	67	100

Appendix DD

Table 3: Range of Percent On-Task

Student		Baseline	Intervention
Amelia	Science	100-33	88-20
	English	100-0	100-45
	Social Studies	100-55	100-88
	Math	100-0	100-0
Claudia	Science	100-0	100-22
	English	100-0	100-33
	Social Studies	100-0	50-0
	Math	100-0	100-0
Corinna	Science	100-22	100-22
	English	100-11	100-22
	Social Studies	100-0	100-45
	Math		
April	Science	100-22	100-22
	English	100-33	100-44
	Social Studies	100-0	55-0
	Math	100-0	100-67

Appendix EE

Table 4: Percent Days Above 80% On-Task

Student		Baseline	Intervention
Amelia	Science	9	24
	English	80	33
	Social Studies	93	100
	Math	32	67
Claudia	Science	33	6
	English	13	29
	Social Studies	32	0
	Math	14	67
Corinna	Science	22	14
	English	42	25
	Social Studies	54	20
	Math		
April	Science	30	24
	English	15	29
	Social Studies	56	0
	Math	28	67

Appendix FF

Table 5: Percent of Work Completion

Student		Baseline	Intervention
Amelia	Science	83.6	91.9
	English	100	97.9
	Social Studies	100	100
	Math	80.2	100
Claudia	Science	69.6	74.7
	English	89.2	96.9
	Social Studies	72.2	40
	Math	29.6	100
Corinna	Science	74.7	83.3
	English	96.7	83.5
	Social Studies	94.5	100
	Math	N/A	
April	Science	66.7	94.4
	English	100	89.3
	Social Studies	91.9	50
	Math	54.6	100

Appendix GG

Table 6: Median Percent Work Completion

Student		Baseline	Intervention
Amelia	Science	95	100
	English	100	100
	Social Studies	100	100
	Math	100	100
Claudia	Science	95	100
	English	100	100
	Social Studies	100	50
	Math	100	100
Corinna	Science	75	100
	English	100	100
	Social Studies	100	100
	Math		
April	Science	100	100
	English	100	100
	Social Studies	100	50
	Math	62.5	100

Appendix HH

Table 7: Range of Work Completion

Student		Baseline	Intervention
Amelia	Science	100-50	100-50
	English	0	100-81
	Social Studies	0	0
	Math	0	0
Claudia	Science	100-50	100-50
	English	100-25	100-78
	Social Studies	100-0	100-0
	Math	100-0	0
Corinna	Science	100-0	100-0
	English	100-50	100-0
	Social Studies	100-60	0
	Math		
April	Science	100-0	100-75
	English	100-0	100-50
	Social Studies	100-0	100-0
	Math	100-0	0

Appendix II

Table 8: Days Above 80% Work Completion

Student		Baseline	Intervention
Amelia	Science	64	89
	English	100	89
	Social Studies	100	100
	Math	75	100
Claudia	Science	46	50
	English	78	86
	Social Studies	60	20
	Math	30	100
Corinna	Science	78	77
	English	93	75
	Social Studies	79	100
	Math		
April	Science	58	81
	English	100	71
	Social Studies	84	50
	Math	46	100

Appendix JJ

Average Redirections Per Class

Student		Baseline	Intervention
Amelia	Science	0.29	0.28
	English	0	0
	Social Studies	0.24	0
	Math	0.37	0.67
Claudia	Science	1.21	1.28
	English	0.5	0
	Social Studies	2.1	2.8
	Math	1.41	0.33
Corinna	Science	0.35	0.41
	English	0.19	0.11
	Social Studies	0.95	0.6
	Math		
April	Science	0.54	0.67
	English	0.1	0
	Social Studies	1.41	2.25
	Math	0.76	0

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