GENDER DIFFERENCES IN THE HOMEWORK PREFERENCES OF STUDENTS WITH LOW SELF-REGULATION

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A Dissertation

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ABSTRACT

Academic success and the completion of homework are predicted to have a direct relationship, as does academic success and the likelihood of obtaining employment. It is important to help students with poor self-regulation skills with their homework practices and find an avenue in which teachers may provide support. Different types of homework are completed more willingly by different types of students so the purpose of this research was to find 1) what types of homework students who have poor self-regulation skills are most likely to complete 2) what delivery method of homework students who have poor self-regulation skills are most likely to complete 3) what grading policies encourage students with poor self-regulation skills to complete their homework 4) if gender is a factor in these preferences.

The findings of this study reveal a statistically significant preference for certain types of homework and delivery methods by students with poor self-regulation skills. The results also reveal a statistically significant difference by gender in all three areas of focus. Using these preferences in the academic setting may provide a delivery method for building important self-regulation skills for students and improve the possibility of academic success.

Keywords: Homework, self-regulation, self efficacy, homework completion, gender
DEDICATION

To my mother, Connie:

For your unwavering support and encouragement. You are my best friend, confidant, and mentor.

I love you with all of my heart.
ACKNOWLEDGMENTS

Over the last few years I have received support and encouragement from a great number of people. There are several professors from the College of Education that are truly remarkable and make this an incredible program. Dr. Gwynne Rife is all-around amazing and deserves many thanks. She has been an incredible cheerleader, mentor, and role model. She gave me a great amount of encouragement and guidance during this process. She answered all of my panic emails timely and found a way to put things into perspective with a positive flair. I would like to thank my dissertation committee, Dr. Julie McIntosh and Dr. Melissa Cain, who both took countless hours to read and reread my work and provide detailed feedback and support. They are intelligent, thoughtful and incredibly generous. I would also like to thank Dr. Jon Brasfield for his expansive knowledge base and statistical advice. He has high expectations and a true clarity of purpose that still conveys compassion and support for all of his students. Dr. Kathleen Crates allowed for the flexibility to make a major project, not only applicable but also extremely meaningful to my work and to my study. She is supportive, caring and encouraging. I am eternally grateful for the opportunity all of these mentors have provided as well as the College of Education for their dedication to their students and their future.

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companion and friend from the very start. Her friendship has meant a lot to me and she has made some of the most difficult times rewarding and even fun.

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CHAPTER I. INTRODUCTION

“When I was growing up, my parents used to say to me: ‘Finish your dinner - people in China are starving.’ I, by contrast, find myself wanting to say to my daughters: ‘Finish your homework- people in China and India are starving for your job.’” This quote by Thomas Friedman (The New York Times, 2004, p.1), Pulitzer Prize winner and The New York Times columnist, reiterates the sentiment many people have about the importance of homework. While Friedman’s comments lend humor to the notion of homework and success, researchers such as Cooper, Robinson and Patall (2006) argue in all seriousness that homework completion and academic success go hand in hand. Parents have told us for years, “Do your homework, have success at school, and get a good job.” It’s what parents, teachers, schools and administrators all want for their students. But what happens when students don’t have academic success? It is important to overcome the roadblocks to this success and discover an alternate route for these students.

Background of the Problem

What makes homework so effective? What do teachers assign in their homework that provides this success? According to Sadlier (2010) several reasons exist as to why teachers assign homework:

(1) practicing material already presented by the teacher in class; (2) previewing upcoming material to prepare students for in class lessons; (3) applying skills learned in class to a new problem or situation; (4) producing products that synthesize a unit’s or semester’s worth of learning; (5) fostering communication and supportive partnerships with parents/guardians; and (6) developing study skills and independent learning skills in
students practice, preview, applying skills, producing products, fostering communication and supportive relationships, develop study skills and independent learning skills (p.1). This list of intended outcomes defines what can be used to help advance the academic success of the student. These activities provide the extra work and extra practice that can give students an edge on the academic competition. In short, this extra work can help to provide the gateway to success for many students.

Conversely, some students have difficulties with homework completion and as a result, lose the intended outcomes of homework. Some of the reasons students have difficulties with homework completion have to do with some negative outcomes of homework. Sadlier (2010) listed some of the unintended consequences of homework as well. These include:

(1) creating stress between students and their parents/guardians; (2) confusing students with different instructional methods employed by family members with the best of intentions but little knowledge of best practices; (3) limiting students’ time for family, community, and extracurricular activities; (4) causing student burnout and boredom regarding a particular subject or learning in general; (5) encouraging cheating; and (6) exacerbating socio-economic-based inequalities that impact student achievement (p.1). The unintended consequences suggest many students may not be able to complete homework on their own. Problems such as stress between student and parent and differences in instructional methods, can complicate the homework process and make only the most skilled student successful. While the teacher has good intentions with homework assignments, the outcome can only be great when the student can overcome these problems and successfully completes homework.
When looking at both the positive and negative homework lists, clearly some students can work independently on their assignments, some cannot, and still others can but choose not to. Some students can complete the assigned work with assistance, maybe with a diligent parent, caregiver or study partner. Unfortunately, other students do not have the skills associated with the ability to successfully complete homework. Sadlier (2010) points out a reason for assigning homework as the development of independent learning skills and yet other researchers such as Kitsantas and Zimmerman (2009) say that successful completion of homework has the \textit{prerequisite} of these important skills.

Kitsantas and Zimmerman (2009) state successful homework completion requires the self-regulation of learning. Ramdass and Zimmerman (2011) went further with their studies to say self-regulation of learning involves learners setting goals, selecting appropriate learning strategies, maintaining motivation, engaging in self-monitoring, and evaluating their own academic process and that these skills develop gradually and with practice. When discussing the relationship between homework and self-regulation, they state, "It reveals that quality measures of homework such as managing distractions, self-efficacy and perceived responsibility for learning, setting goals, self-reflection, managing time, and setting a place for homework completion are more effective than only measuring the amount of time spent on homework" (para.1) In short, successful completion of homework provides success and successful completion of homework relies on self-regulation skills.

Studies show students dedicate a lot of time to the practice of homework. All over the country, the common nightly ritual of homework plays out. As of 2007, according to the National Center for Education Statistics, high school students who do their homework at home average 6.8 hours per week with 41.9% of this student population doing homework five or more
days a week. According to a recent time-use survey by Zuzanek (2009), homework demands have decreased only slightly since the 20th century. Zuzanek (2009) even added that more recently, over the past 15 years, the amount of homework has either changed very little or decreased. Students today consistently and persistently put in a great deal of time outside of the school day working on homework. To clarify the amount of time spent, researchers can look at the length of the school year. According to Ohio Law (ORC 3313.48, OAC 3301-35-06), the school year has a minimum of 182 days. Assuming five school days make a week, 182 days will create a little more than 36 weeks in a school year. This means each high school student in the United States spends an average of nearly 250 additional hours outside of the school day doing homework. Again, if successful completion of homework provides success and successful completion of homework relies on self-regulation skills then students without these skills may be missing out on up to 250 hours, on average, of extra practice every year that could lead to academic success.

Since the average student increases their school year by almost 250 hours through homework, as discussed above, naturally, Cooper, Robinson and Patall (2006) found that high school students who did homework had higher academic performance than students who did not do homework. Overall, Cooper et al. state, “there was generally consistent evidence for a positive influence of homework on achievement” (p.1). Bembenutty (2011) also agrees, “homework improved achievement, had a positive effect on unit tests, had a positive link to grades or standardized tests, and, relative to other educational interventions, homework had an above average effect on achievement” (p.1). More importantly, to this problem, Cooper et al. (2006) find a strong association between homework completion and academic achievement for the secondary student more than the elementary students. Cooper et al. state, “consistent
evidence for a positive influence of homework on achievement” (p.1). As a result, the importance of homework increases as the student advances grade levels and the importance of required independent learning skills required for homework success also increases. Students, especially older students, may need practice and training embedded in their homework that will allow for them to acquire these important skills that lead to academic success and independent learning.

The interconnectedness of academic success, homework and independent learning creates a relationship worth studying. Bembenutty (2011) agrees with Zimmerman’s (1990) findings that a positive relationship exists between the completion of homework and a range of self-regulation processes and self-efficacy. Bembenutty (2011) summarizes his findings by stating that in order to be successful in homework completion, learners need self-regulation. A problem may exist for students who lack these self-regulation skills. Strategies to develop these skills can be incorporated into students’ practice (Sadlier, 2010). Teachers need the knowledge of the types of homework non-self-regulating students likely complete so they can incorporate self-regulation skill building into those types of homework.

**Rationale & Significance of the Study**

Some social-environmental factors contribute to the academic success of a child. Parents and families of students and the students themselves have a vested interest in academic success. In 2012, according to a study by the U. S. Department of Education, as referenced in an article written by Weissmann (2014), college dropouts are almost three times more likely to be unemployed than college graduates. Academic success may have great financial consequences on families as well as the students. Parents and families may have to bear the financial burden of post-secondary schooling or even the financial support of an older child not finding academic
success. The proliferation of self-regulation may help more students find academic success, and help reduce this burden on parents, families and independent students.

Schools, another social-environmental factor, can also benefit from this research. The public ranking of schools on overall academic success and academic growth of their students, make schools a primary stakeholder. A highly ranked school in a city or municipality can influence property values, school funding and community support because more affluent homebuyers will seek out better school districts in which to live. According to a study on house prices in Chicago from 1987 to 1991, Downes and Zabel found evidence suggesting school-level output variables, such as test scores, contribute to the positive impact on house prices (2002). Another study by Haurin and Brassington (1996) from The Ohio State University reinforces this finding and suggests this relationship is not limited to Chicago, “public school quality has a very large impact on real constant-quality house prices” (p.2). Student performance and growth measures may directly affect a teachers’ evaluation depending on the state of licensure and how teachers are required to document student growth. For example, The Ohio Department of Education requires up to 50% of a teacher’s evaluation to be based on student growth measures (2016). According to the United States Department of Education (2014), 23 states require the use of Student Learning Objectives (SLOs), a growth measure, for individual teachers and 14 of those states require the teacher to track the SLO data and submit it to their evaluator. According to the same report, another two states make SLOs optional for individual teachers and three more states require them for teacher teams and/or grade levels. Three more states have school level SLOs that apply to all teachers (U.S. Department of Education, 2014). Using these common growth measures at the teacher, teacher team or even school level, indicates the academic success of a student important for teachers as well as administrators.
Investigating gaps identified from previous studies will support future research. According to the article by Ramdass and Zimmerman (2011), homework research needs more study across the full spectrum of elementary through college, specifically in the sciences and foreign language. They state:

Apart from mathematics, reading, and language arts, a need for homework research on foreign languages and the sciences exists. Consideration of these academic subjects would facilitate studying self-regulation processes students engage in while learning such as strategy use, monitoring performance, and self-beliefs. Finally, training teachers and parents to facilitate homework completion needs greater research. Such instruction can help children and struggling adolescents develop a range of self-regulatory behaviors and improve academic performance (p.214-215).

To summarize, the facilitation of homework completion needs more research, particularly for the students who lack self-regulatory skills. Also, little research exists in this specific area on students who lack self-regulation skills and any differences gender may have on these skills and/or homework completion. Finding the types of homework these students, both male and female, have the ability or are most likely to complete may allow teachers to employ homework as a tool in order to help students practice these valuable skills. Gradual practice of these skills may allow a student to eventually acquire them and develop independent learning skills.

**Purpose of Study**

Teachers have the ability to help students make the connection between self-efficacy, self-regulation and homework completion. As Sadlier (2010) suggests, one of the intended outcomes of homework is to develop study skills and independent learning skills in students. When teachers have the ability to incorporate self-regulation skill development into homework
preferences, students without those skills may gradually acquire them. Since the successful completion of homework needs self-regulation skills, as students gain them, the more homework they may be able to successfully complete leading to the benefit and reward of academic success.

As a result of the researched importance of homework, numerous studies have looked into the skills most needed to complete homework (Bembenutty, 2011; Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011; Zimmerman, 1990). These same studies also make the connection between homework completion and overall academic success such as the one mentioned earlier by Kitsantas and Zimmerman (2009). In their study they discuss, in detail, the importance of homework completion and its relationship to student development of self-regulation and positive self-efficacy, both of which have shown to help with educational success at the secondary and post-secondary levels. Ramdass and Zimmerman (2011) state, “Evidence from experimental studies shows that students can be trained to develop self-regulation skills during homework activities” (para. 2). Exploring the different types of homework skills practice, skills application, product production, communication, preview or study skills - most likely to be completed by students who lack self-regulation skills may allow teachers to help build these skills in the students that need them most.

**Theoretical Framework**

**Social cognitive theory and motivation.**

Social Cognitive Theory (SCT), coined by Albert Bandura in 1986, has its conceptual origins as far back as the 1930’s. The idea of social learning and learning through imitation was first introduced by Edwin Holt, a philosophy and psychology professor from Harvard. Holt’s work, *Animal Drive and the Learning Process* (1931), was very influential and started the roots for what is known today as SCT. This theory, cultivated and fine-tuned by Bandura over time,
helps to explain how behavior is learned through modeling and the observations of others (1991). Bandura further states, “Neither intention nor desire alone has much effect if people lack the capability for exercising influence over their own motivation and behavior” (p. 249). This influence that Bandura speaks of is the direct connection between behavior and self-regulation.

Self-regulation is more complicated than just having the motivation to do something. The structure behind self-regulatory systems, according to Zimmerman (2000), has three cyclical sub phases/sub functions: forethought phase, performance phase, and self-reflection phase. These phases have an order and must be repeated for potential success. The performance of these phases can also require considerable metacognitive processes. Zimmerman (2000) adds detail to these phases by including some of the skills required as seen in Table 1. Many of the skills Zimmerman lists may be challenging for a student to perform, even in the best of situations. Garcia and Pintrich (1994) state when students don’t find success with these processes, they often change to self-handicapping strategies, such as procrastination, pessimism and decreased effort in order to protect their sense of self-worth when faced with potential failure. This motivational reaction may affect future attempts at the phases and processes behind self-regulation; thus the cyclical nature of the processes.
Table 1

*Phase Structure and Sub Processes of Self-Regulation*

<table>
<thead>
<tr>
<th>Cyclical self-regulatory phases</th>
<th>Performance/volitional control</th>
<th>Self-reflection</th>
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<tbody>
<tr>
<td>Forethought</td>
<td>Self Control</td>
<td>Self-judgment</td>
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<tr>
<td>Goal setting</td>
<td>Self-instruction</td>
<td>Self-evaluation</td>
</tr>
<tr>
<td>Strategic planning</td>
<td>Imagery</td>
<td>Causal attribution.</td>
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<tr>
<td></td>
<td>Attention focusing</td>
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<td></td>
<td>Task strategies</td>
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<tr>
<td>Task Analysis</td>
<td>Self-observation</td>
<td>Self-reaction</td>
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<tr>
<td></td>
<td>Self-efficacy</td>
<td>Self-satisfaction and affect</td>
</tr>
<tr>
<td></td>
<td>Outcome expectations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Intrinsic interest value</td>
<td>Adaptive-defensive.</td>
</tr>
<tr>
<td></td>
<td>Goal orientation</td>
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Self-regulation needs more than just motivation, but it is still a key component (Ramdass & Zimmerman, 2011). Extrinsic motivation, in particular, is very important to self-regulation. Intrinsic motivation does not provide the type of motivation needed for most activities; many people must rely on other forms of motivation as responsibilities, demands and other required tasks become less intrinsically appealing (Ryan & Deci, 1999). More importantly to this
research, Ryan and Deci (1999) state, “In schools, for example, it appears that intrinsic motivation becomes weaker with each advancing grade” (p. 60). As intrinsic motivation wanes, extrinsic motivation takes over and is more influential as the student ages.

However, intrinsic and extrinsic motivations are not completely delineated. Reasons for acting can range greatly between individuals. In other words, causality or perceived locus of causality (PLOC), according to Ryan and Connell (1989) can be connected to motivation in many ways but can be grouped by similarities of causation. Ryan and Connell make connections between three reason categories: external, introject, and identification with respect to empathy, moral judgment, and positive interpersonal relatedness as seen in Table 2. That is, many reasons exist to motivate someone to act, but the cause of the motivation can be grouped to better understand the relationships between them.
Table 2

*Descriptions and Examples of Reason Categories for Causation*

<table>
<thead>
<tr>
<th>Reason category</th>
<th>Description</th>
<th>Examples</th>
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<tbody>
<tr>
<td>External</td>
<td>References external authority.</td>
<td>Fear of punishment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rule compliance</td>
</tr>
<tr>
<td>Introjected</td>
<td>Internal, esteem-based pressure.</td>
<td>Guilt avoidance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concern for self or approval from others</td>
</tr>
<tr>
<td>Identifications</td>
<td>Acting from one’s own values or</td>
<td>Done for inherent joy or fun</td>
</tr>
<tr>
<td></td>
<td>goals</td>
<td>I want….</td>
</tr>
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</table>

*Note.* Ryan and Connell (1989)

**Self-Determination theory and motivation.**

Another theory about motivation is Self-Determination Theory (SDT). Developed by Edward Deci and Richard Ryan can be applied to motivation in several areas including the field of education. Students can be active in the learning process, compliant, passive, or completely apathetic, but as Ryan and Deci (2000) point out, “The real question concerning nonintrinsically motivated practices is how individuals acquire the motivation to carry them out and how this motivation affects ongoing persistence, behavioral quality, and well-being” (p.71). According to SDT, in order to acquire perseverance and to maintain the tenacity to complete a perceived undesirable task, one must have other needs met, specifically, three innate psychological needs: competence, autonomy and relatedness (Ryan & Deci, 2000). Competence and autonomy, in
this case, refer to having the skills to complete the task and an increased sense of freedom and choice in regard to that task, respectively. Relatedness has more to do with the essential need for a person to develop and maintain a close relationship with someone else and how that task influences that relationship. Increasing fulfillment of these needs helps to increase intrinsic motivation and anything not helping with the realization of these needs can lead to an increase of reliance on extrinsic motivation. To reinforce this concept, Thuneberg (2005) studied the motivation and fulfillment of psychological needs of 732 elementary and middle school students using the Self-Regulation Questionnaire Academic, SRQ-A (Ryan et al., 1989). She compiled a Relative Autonomy Index (RAI) on each student based off their answers to the SRQ-A in the categories of external, introjected, identified and intrinsic motivations. Thuneberg found that autonomy, in particular, was a high motivational factor for middle school students and on average students were less likely to be autonomous and less motivated. Although her subjects were not random, she also found that autonomy was highly correlated with school performance as measured by GPA.

**Research Questions**

There is a strong connection between homework completion and academic success (Bembenutty, 2011; Cooper, Robinson, and Patall, 2006; Kitsantas & Zimmerman, 2009; Zimmerman, 1990) and another connection between homework completion and the concept of self-regulation (Bembenutty, 2011; Ramdass & Zimmerman, 2011; Zimmerman, 1990). The concept of self-regulation, including the process of managing distractions, maintaining motivation, self-efficacy, setting goals, managing time, and self-reflection is very important to the academic success of students (Ramdass & Zimmerman, 2011; Zimmerman & Kitsantas, 2014). Since students significantly do better academically when they possess self-regulatory
skills (Ramdass & Zimmerman, 2011; Zimmerman & Kitsantas, 2014), this research focused on the students who lack these important skills. This information can help teachers better incorporate these skills into daily student activities, such as homework in order for students to build these skills. Since very little research has been done about lack of self-regulation, homework preferences and differences by gender, this research included gender specific data and addressed the following specific questions:

1. What types of homework do students who have poor self-regulation skills prefer to complete and is this influenced by gender?
2. What homework delivery methods do students who have poor self-regulation skills prefer to complete and is this influenced by gender?
3. Do grading policies affect homework completion by students with poor self-regulation skills and is this influenced by gender?

In order for teachers to help students build self-regulatory skills through homework, the students must first complete the work assigned. This study determined the students who lack self-regulation in order to determine what types of homework they are most likely to complete. With this information, teachers can start to incorporate self-regulatory skills into this type of homework. As a result, this study examined the following:

1. Certain types of homework have a higher completion rate by students who have poor self-regulatory skills and this may be different by gender.
2. A common influence, such as homework delivery method, encourages students with poor self-regulation skills to complete homework and this may be different by gender.
3. A common influence, such as homework grading policies, encourages students with poor self-regulation skills to complete homework and this may be different by gender.
**Definition of Terms**

*Autonomous.* Existing or capable of existing independently (Merriam Webster, retrieved 2016).

*Extrinsic motivation.* Based on reward systems, grades, evaluations or opinions of others (Ryan, R. & Deci, E., 2014).

*Intrinsic motivation.* Based on personal interests, curiosity, care or abiding values (Ryan, R. & Deci, E., 2014).

*Introject.* The ability to take in the expectations of projections of others, communicated to us nonverbally or verbally (Mathews, A., 2013).

*Self-efficacy.* The extent or strength of one’s belief in one’s own ability to complete tasks and reach goals (Omrod, J. E., 2006).

*Self-regulation.* The ability to act in one’s long-term best interest, consistent with one’s deepest values (Stosny, S., 2011).

*Self-regulated learning.* Learning guided by metacognition and strategic action, such as planning, monitoring, and evaluating personal progress against a standard. It includes the process of taking control of and evaluating one’s own learning behavior (Zimmerman, B. J., 1990).

*Students.* For the purpose of this paper, students in kindergarten through college are included. Students, for the purpose of the study are limited to high school grades 9-12.

**Limitations**

This study identifies specific types of homework, delivery methods and grading policies students who lack self-regulation skills will most likely complete. It does not address the reasons or motivations behind completing or not completing certain types of homework.
Students at a small suburban high school in Ohio, grades 9-12, are included in this research. High school students were chosen for this research because of the importance of self-regulation skills in the transition from high school to the rigor of college (Strage, 1998). Improving self-regulation at this age is most applicable to this research. Because this examination only included students at this specific high school, the generalizability of the results will only apply to this population.

The number of students completing the survey and the specific time in the school year in which they took the survey limited this study. Timing of the survey may have caused limitations because some students may remain more motivated at the beginning of the year and possibly less motivated at the end of the year. This potential flaw may have affected the overall completion percentage of homework but should not have affected the types of homework completed. Since the type of homework completed was one of the primary areas of examination, students needed to possess the ability to understand the questions asked in the surveys and have the ability to determine what type of homework they tend to complete. Because of this, examples of different types of homework were provided to add clarification.

**Researcher Bias**

This study found specific types of homework have a higher incidence of completion by students who lack self-regulation skills. Teachers may be able to utilize this preferred type of homework as a tool to help develop self-regulation skills in students that need them. Practicing these skills may help students take control of their own learning over time. Given the connection between completed homework and academic success, as discussed here, it is important to examine the types of homework a student who lacks self-regulation will complete. Homework provides more than just a chance to practice content. It helps students acquire the study skills.
and self-regulation needed when rigor and independence become crucial (Ramdass & Zimmerman, 2011).

Students who lack self-regulation skills may be motivated by external factors. External factors may be used to encourage homework completion and lead to the acquisition of important self-regulation skills for some students. This study included several homework factors, including homework types, delivery methods and grading policies in order to determine a relationship between these factors and a lack of self-regulation. This preference may provide an intervention to help the extrinsically motivated student to practice time management and other self-regulations skills through increased homework completion.

It is important to note, the researcher for this study is employed at the school in which this research took place. During the time of this survey, the researcher had 29.34% of the school population in class. The researcher is familiar with the grading policies and homework practices of this school as well as the expectations of the administration and school leaders. This familiarity influenced the choice of research questions for this study.

Summary

This research examined specific types of homework, delivery methods and grading policies that have a higher incidence of completion by students who lack self-regulation. Teachers may be able to utilize these types of homework as a strategy to build self-regulation within this population to help them practice these needed skills and ultimately take control of their own learning. Given the connection between completed homework and academic success, as discussed here, it is important to examine what types of homework will be completed by academically unsuccessful students. Homework provides more than just a chance to practice
content. It helps students acquire the study skills and self-regulation needed when rigor and independence become crucial.

Intrinsic motivation reflects a natural tendency for humans to learn and often results in high-quality learning (Ryan & Deci, 2000). Extrinsic motivation provides varied reasons behind actions and not all are impoverished forms of motivation (Ryan & Deci, 2000). Students who have poor self-regulation skills are often motivated by external factors. External factors, perhaps a grade, may be used to encourage homework completion and may lead to the acquisition of important self-regulation skills for some students. This research included several homework factors, such as homework types, delivery method and grading practices in order to determine a link between these factors and poor self-regulation. This connection may provide an intervention to help the extrinsically motivated student acquire practice, time management and other self-regulation skills through appropriate forms of homework.

Teachers recognize that intelligent students are capable of learning most anything. These students may fare well in SAT scores, ACT scores, grade point averages and class rankings, but these same students may not always make it through college, some dropping out after the first or second year. Their intelligence may even mask poor self-regulation skills and leave them unable to handle the challenges of post-secondary academia, with little warning. Garner and Waajid (2012) found student self-regulation could predict classroom behaviors, but it could not predict cognitive competence. A student’s intelligence and experience may help them with academic challenges until the rigor is too much for them; then students need self-regulation for academic success (Kitsantas & Zimmerman, 2009; Randass & Zimmerman, 2011; Schunk & Zimmerman; 1996; Zimmerman & Bandura, 1994; Zimmerman & Kitsantas, 2014; Zimmerman & Schunk,
implementing strategies in order to build these important self-regulation skills may help students before they find themselves in a dead end or starving for a job.
CHAPTER II. LITERATURE REVIEW

The benefits and nature of homework assigned by teachers is a source of debate. As Sadlier (2010) points out, there are both numerous positive and numerous negative consequences to homework. Homework can foster communication, develop study skills and independent learning skills; but, homework can also confuse students, cause boredom, burnout and even create stress (Sadlier, 2010). Students often feel overburdened with work, while teachers strive for completion. Parents find themselves stuck in the middle in a never-ending nightly routine. According to Cooper (2008) as published by the National Council of Teachers of Mathematics (NCTM), homework popularity has fluctuated over the years in approximately 15-20 year cycles. In the 1940’s, as education focused on problem solving as opposed to fact drilling, homework assignments decreased. In the 1950’s, the Russians launched Sputnik and the United States feared our children were being left behind. Thus, homework became more common. In the 1960’s, homework was viewed as adding too much pressure and stress on students and homework ebbed again. This pattern continues today. As of 2006, a nationwide poll by Learning Services (Associated Press, 2006), found 57% of parents feel their child is assigned about the right amount of homework and only 19% believe their child is given too much. Cooper provides more detail and states there are proponents and opponents to homework: the opponents focus on the negative effects, such as boredom, stress and denial of other activities, while the proponents believe there are more positive effects to homework than just improved achievement, such as academic growth, good study habits and acquisition of independent learning skills. Identifying the factors that emphasize the positive effects of homework and also those that minimize the negative impacts in relation to homework is one focus of this review of literature. It will offer a
theoretical perspective with a focus on the theories, ideas, skills and motivation behind learning and how these relate to homework, self-regulation, academic success and gender.

**Self-Regulation Definition and Implications**

Zimmerman (1994) succinctly defines self-regulation as “the degree to which students are active and responsible participants in their own learning process” (p.4). The word active in this definition should be emphasized and never confused with any kind of passive compliance on the part of the student. Self-regulation usually refers to many active processes and according to Bandura (1993), there are three areas of psychological functioning important in self-regulated learning: cognitive – regulated by forethought and self-appraisal of capabilities, motivational-forethought translated into incentives, and metacognitive – belief in one’s own skills. These three areas involve a series of processes, all of which have been connected to academic success. Zimmerman and Schunk (2001), state research on self-regulation has recognized self-regulatory processes, such as learning strategies, goal setting, self-efficacy, task value, self-monitoring, and self-evaluating, are foretelling of students’ achievement in school, including improved scores on standardized achievement tests. This information is repeated in another literature review by Kitsantas and Zimmerman (2009). This connection between self-regulation processes and academic success has consistency among studies (Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011; Schunk & Zimmerman, 1996; Zimmerman & Bandura, 1994; Zimmerman & Kitsantas, 2014; Zimmerman & Schunk 2001). Zimmerman and Bandura (1994) agree and add, “Good self-regulators do better academically than poor self-regulators even after controlling for other potentially influential factors” (p. 846).

In addition to self-regulation influencing academic success, Stosny (2011) has found it to positively influence emotional stability. In fact, Stosny states it is necessary for emotional well
being. This is yet another connection between self-regulation and motivation due to the fact emotional stability can provide an increased awareness of performance. The ability to focus on values rather than emotions, allows one to better self-regulate (Stosny, 2011). A healthy emotional state helps one’s ability to adjust learning strategies, set goals, value tasks, self-monitor, and self-evaluate and generally practice self-regulation.

The most important implication of self-regulation for this examination is its application in the transition between high school and college. Strage (1998) writes, “The ability to make a successful transition to and through college is one of the most important challenges faced by adolescents and young adults. Researchers have clearly demonstrated the significance of self regulation skills in such academic contexts” (para. 2). In his study of 465 college students, Strage (1998) finds the self-regulated learner as someone who is metacognitively sophisticated with the ability to change learning strategies in order to find success. As the challenges of college are recognized and the evolution of rigor and support from high school are realized, students are able to change learning strategies in light of these new challenges and persevere. Ramdass and Zimmerman (2011) agree with this idea that self-regulation becomes more important as a student ages due to general release of teacher support and a student’s need to become more independent with their learning.

**Development of Self-Regulation**

Acquiring self-regulation is a gradual process that strengthens over time. Typically, self-regulation development starts at approximately 36 months of age (Kopp, 1982; Posner & Rothbart, 2000). From this point, a slow process of awareness and reasoning begins to increase and coincide with the transition from self-control to self-regulation during the preschool years (Kopp, 1982). As this gradual transition continues, advancement varies from student to student.
Puustinen (1998) found in a study of 167 second and fourth graders that only the fourth graders displayed advanced self-regulation and those skills were highly dependent on age and academic achievement. As the school years progress, and students become more familiar with school expectations, only the self-regulated learners acquire the skill to ask for help when needed. Self-regulated learners also do not ask for help when help is not needed (Puustinen, 1998). In short, this regulation includes learning a self-monitoring process and acquiring the ability to change learning strategies when needed. Academic success hinges on this ability. Schunk and Zimmerman (1996) echo this finding and identify the development of academic-related self-regulation and motivation as a crucial component to school adjustment and success. In fact, Ramdass and Zimmerman (2011) as stated earlier, as students get older, self-regulation processes are even more important because teachers often reduce support for the maturing learner.

**Self-Regulation and Gender**

The difference in self-regulation by gender is inconclusive. Different studies have found varied results. In 2014, Zimmerman and Kitsantas performed a multi-source, multi-measure research design on self-regulation, self-discipline and academic performance. In this study of 507 high school students, they used a hierarchical regression analysis and a confirmatory factor analysis to find that self-regulation was more predictive of a student’s grade point average and achievement on statewide standardized tests than self-discipline (Zimmerman & Kitsantas, 2014). In this same study, Zimmerman and Kitsantas also completed a structural equation modeling analysis and found that self-regulation predicted both of these achievement measurements but found no significant gender differences within self-discipline, self-regulation or achievement measures (2014). In other words, self-regulation was found to be a better predictor for academic success rather than gender. Another study by Schnell, Ringleisen,
Raufelder and Rhormann in 2015 had similar findings. Their study on 783 ninth and tenth grade students regarding test anxiety, self-efficacy, self-regulation processes and school performance found no significant gender differences in the connections between self-efficacy, self-regulatory, goal attainment processes, and academic performance (Schnell et al., 2015).

However, other studies show a difference in gender and self-regulation. A study by Zimmerman and Martinez-Pons (1990) analyzed 14 different self-regulatory learning strategies in fifth, eighth and eleventh grade students. Zimmerman and Martinez-Pons (1990) found that females in this group were better at self-monitoring, goal setting and planning than their male counterparts. Another study by Pokay and Blumenfeld (1990) also found gender differences. Their study included high school age students and found that females were better with metacognitive and cognitive regulation strategies. Finally, another study by Bidjerano (2005) focused specifically on gender and its role in self-regulated learning. This study on 198 undergraduate students found that females over report some self-regulated learning strategies such as rehearsal, organization, metacognition and time management (Bidjerano, 2005). Bidjerano also found that there were not statistically significant gender differences with study time with peers, help strategies or critical thinking skills (2005). While some studies find differences in self-regulation and gender, others do not. At best, research is still inconclusive.

This research examined the differences in homework preferences of students who lack self-regulations skills and isolated this information by gender. This research also found difference in preferences by gender but did not attempt to clarify opposing views between self-regulation and gender. In short, this examination did not attempt to make a connection between self-regulation and gender or any differences gender has on self-regulation skills or academic success.
Self-Regulation and Homework

The connection between self-regulation and academic success is well documented (Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011; Schunk & Zimmerman, 1996; Zimmerman & Bandura, 1994; Zimmerman & Kitsantas, 2014; Zimmerman & Schunk, 2001) however the connection between self-regulation and homework is a little more complex. A connection between the two is clear (Bembenutty, 2011; Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011; Zimmerman, 1990), but the causality between self-regulation and homework is complicated (Kitsantas & Zimmerman, 2009). Kitsantas and Zimmerman studied 223 undergraduate students and found that homework provides many vital psychological benefits to the development of self-regulated processes; however, they admit, “drawing causal inferences regarding these variables is difficult.” (p.107). The difficulties in drawing deductions of cause and effect between homework and self-regulation do not interfere with the conclusion that the two are still intertwined. Some studies find homework can be used to improve self-regulation (Ramdass & Zimmerman, 2011; Sadlier, 2010) other studies find self-regulation is needed to successfully complete homework (Bembenutty, 2011; Kitsantas & Zimmerman, 2009; Zimmerman, 1990). The two appear to influence each other in a mutually advantageous relationship.

According to Kitsantas and Zimmerman (2009), homework has a significant impact on academic achievement and the development of self-regulation. Ramdass and Zimmerman (2011) came to a similar conclusion in their meta-analysis of elementary, middle school, high school and college students: “The findings showed positive relationships between homework activities and self-efficacy, self-reflection, responsibility for learning, maintaining focus, managing the environment, inhibiting distractions, delaying gratification, and managing time” (Zimmerman,
2011, conclusion section para. 1). In addition to these results, evidence also revealed self-regulation takes time to acquire and continual practice is more important as students get older due to reduced homework support (Ramdass & Zimmerman, 2011).

While a positive relationship is almost absolutely certain to exist between self-regulation and academic success and self-regulation and homework (Bembenutty, 2011; Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011; Schunk & Zimmerman, 1996; Zimmerman & Bandura, 1994; Zimmerman & Kitsantas, 2014; Zimmerman & Schunk, 2011; Zimmerman, 1990), the benefits of homework and its relationship to academic success are still debated. In a large meta-analysis on the effect of homework on academic achievement by Cooper, Robinson and Patall (2006), they found studies with random homework/no homework assignments were often faulty in some way, making it difficult to infer strong relationships between homework and achievement. However, they state, “…findings from manipulated-homework study designs were quite consistent and encouraging, if not conclusive. They revealed a positive relationship between homework and achievement that was robust against conservative reanalysis, including those using adjusted sample sizes and imputing possible missing data” (2006, p. 47). Cooper et al. (2006), too, found this relationship to be stronger in grades 7-12 rather than grades k-6 as found in other studies previously mentioned (Ramdass & Zimmerman, 2011; Strage, 1998). Given this research, as students get older, the relationship between homework and achievement becomes more important.

However, Sadlier (2010) suggested homework is not always aligned with academic success due to some unintended results of homework assignments. Sadlier (2010) lists some of these “unintended consequences” as burnout, boredom, aggravation of socio-economic disparity and the encouragement of cheating. Sadlier suggests homework can be successful if it is based
on strong well thought-out learning objectives, thus avoiding some of the negative consequences inherent in the practice (2010).

Xu (2011) takes another approach to the connection between homework, homework management, and academic success. In a study of 1,895 eighth and eleventh grade students, high achieving students were found more likely to be actively participating in their homework: active participation includes acquiring a suitable work area, time management, and monitoring distraction and motivation (Xu, 2011). All of the active practices listed could also be identified as self-regulation processes, suggesting another link between self-regulation and homework. Again, this study is not necessarily confirming a direct positive relationship between homework and academic success, but it does make a connection with some limitations. According to Xu, homework management provides the direct connection to academic achievement rather than homework alone. Gurnam, Chan, Parmjit (2010) have similar findings in their study of 1978 third and fourth grade students in Malaysia. They interpret homework, if utilized properly, to be a catalyst in the promotion of good study habits and independent learning.

A meta-analysis by Bembenutty (2011) finds strong positive relationships between self-regulation skills and homework, but admits homework can produce maladaptive behavior in response to some homework demands. According to Bembenutty, this maladaptive behavior can have several forms such as self-handicapping, procrastination, defensive pessimism, defective academic delay of gratification, misregulation, under-regulation and an over reliance on parents to process or make decisions on homework. These maladaptive behaviors can not only prohibit academic achievement but also allow poor self-regulation to persist. Bembenutty (2011) states, “maladaptive behaviors call for more self-regulatory learning training for students and educators” (p. 449). As educators, this research signifies a call to find ways to incorporate
regulatory strategies into homework as a way to diminish poor practices and reinforce independent learning.

The last crucial component to self-regulation and the homework relationship is motivation. Motivation provides the how and why students choose certain behaviors over others. In order to be successful at homework, the student must be motivated to do it. In order for the homework to lead to academic success, students must choose to actively manage homework and their learning strategies. As Zimmerman (1990) states, “Unless the outcomes of these efforts are sufficiently attractive, students will not be motivated to self-regulate” (p. 6). Zimmerman goes on to say student learning and motivation are interdependent and difficult to fully understand; but self-regulated learners are metacognitively, motivationally and behaviorally active learners. In other words, motivation is inherently a part of self-regulation; a student must have the motivation to follow through with the active processes needed to be self-regulated.

**Homework and Gender**

The relationship between homework practices and gender are similar in clarity to that between self-regulation and gender. Self-regulation and gender, as discussed above, had multiple studies that found different results (Bidjerano, 2005; Schnell, Ringeisen, Raufelder & Rohrmann, 2015; Velayutham, Aldridge & Fraser, 2012; Zimmerman & Kitsantas, 2014). In regard to gender and homework, some studies find that females, in general, spend more time doing homework or are more likely to manage their homework assignments (Gershenson & Holt, 2015; Xu 2007). Specifically, Gershenson & Holt (2015) found statistically significant one-hour weekly differences by gender in secondary students’ study time. These findings of extra after-school time that females spend on homework, as Gershenson & Holt state, “…are not explained by gender differences in after-school time use, parental involvement, educational expectations,
course taking, past academic achievement, or cognitive ability” (p. 432). Simply put, according to Gershenson and Holt (2015), secondary female students spend more time each week on homework. On the other hand, Xu and Wu (2013) did not find that gender was statistically related to homework management. Kackar, Shumow, Schmidt & Grzetich (2011) also found no significant gender differences in time spent on homework. In their study of middle school and high school students, age was a better indicator of time spent on homework: “Older adolescents reported doing more homework than younger adolescents” (Kackar, et al., 2015, p. 74). As far as time spent on homework, Kackar et al. found that females and males did not differ in total homework time (2015). Again, depending on population, location and variables, different studies have findings that appear conflicting.

There are differences with homework and gender that don’t include time spent doing homework or homework management. Research by Kackar, Shumow, Schmidt & Grzetich (2011) find that there are situational variables that differ by gender. For example, they found that females do homework in public more than males and females are less stressed about doing homework with friends than males.

**SRQ-A Development and Validity**

The Self-Regulation Questionnaires (SRQ) help to determine motivation and regulation differences (Ryan & Deci, 2000). The SRQ was first validated by the Validation Factor Analysis in 1989 by Ryan and Connell and was used for motivational study among high school students. There are several types of SRQs depending on the area of assessment. The Academic Self-Regulation Questionnaire (SRQ-A) is used for educational settings and was employed in this research. The SRQ-A was used in Thuneberg’s (2005) study of motivation as it relates to the general and special education classroom. Carey, Neal, and Collins (2004) also used a version of
SRQ in their study of self-regulation and addictive behaviors, although this was not specific to the education field.

**Summary**

The focus of this literature review is to better understand the connection between self-regulation and homework and the implications for older students who lack these skills. Since support is gradually removed as students age, the concept of self-regulation becomes more relevant the older students become (Ramdass & Zimmerman, 2011; Strage, 1998). Only 36.2% of 18-24 year-olds in the United States are enrolled in college and there is a nationwide persistence rate of first time college freshman returning for their second year of college of 78.7% (National Center for Higher Education Management Systems, NCHEMS 2010). This means approximately one in four students do not return to a four-year university after their freshman year. This trend also cited in 2007 in a study by Kitsantas and Zimmerman (2009), calls for more study: “Future research should focus on developing and testing the effectiveness of interventions that include the use of homework for freshman college students” (p. 107). Another study by Zimmerman and Schunk (2001) also refers to a gap in the research between self-regulated learning and homework experiences since most research focuses on the homework and its implications on academic achievement. Ramdass and Zimmerman (2011), in a more recent article, suggest the need for research specifically in the areas of foreign language and sciences; specifically in the strategies used during homework and the learning process.

The theories discussed here, Social Cognitive Theory and Self Determination Theory, as well as theories regarding motivation, are all interconnected by self-regulation. The processes, phases, skills and reasoning all play a role one’s ability to self-regulate. These skills are important to the future of our students. Self-regulated students are, on average, more motivated
and achieve more than under-regulated students (Bembentutty, 2009; Ramdass & Zimmerman, 2011). It is important to pursue answers and solutions for the students who lack these skills. The power of motivation behind the self-regulation processes is of particular interest, since one must remain motivated to continue the cycle. As Ryan and Deci (2000) stated, the real question lies in the nonintrinsically motivated student and their practices. As intrinsic motivation wanes, extrinsic motivation takes over. Consequently, this research will focus on preferences and possible motivations of students who have poor self-regulation skills through their homework preferences. Homework will continue to have unintended consequences (Sadlier, 2010) but the question is whether the positive effects can be maximized with a focus on the factors that impact students’ self-regulation skills. Homework is a potential delivery method for the practice and development of important learning strategies and must be examined for possible connections to students with poor self-regulation skills (Ramdass & Zimmerman, 2011).
CHAPTER III. METHODOLOGY

The purpose of this research was to find a connection between types of homework completed and poor self-regulation skills. Self-regulation skills are important to human survival (Zimmerman, Boekaerts, Pintrich, & Zeidner, 2000) and academic success of students (Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011; Schunk & Zimmerman, 1996; Zimmerman & Bandura, 1994; Zimmerman & Kitsantas, 2014; Zimmerman & Schunk, 2001). Homework is also important to self-regulation and vice versa (Bembenutty, 2011; Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011; Zimmerman, 1990). Kitsantas and Zimmerman (2009) state, homework assignments not only have a significant impact on students’ achievement, but also on their self-regulatory development. Ramdass and Zimmerman (2011) elaborate by stating, “…students can be trained to develop self-regulation skills during homework activities” (abstract). Types of homework, homework delivery and grading policies of homework were all considered in order to find preferences and identify a possible intervention for students who lack these important skills as well as identify differences related to gender.

Research Questions

1. What types of homework do students who have poor self-regulation skills prefer to complete and is this influenced by gender?

2. What homework delivery methods do students who have poor self-regulation skills prefer to complete and is this influenced by gender?

3. Do grading policies affect homework completion by students with poor self-regulation skills and is this influenced by gender?
Research Design

This quantitative action research was designed to determine if a relationship existed between specific types of homework most likely completed and a student’s lack of self-regulation. This study used a self-regulation questionnaire (SRQ-A) to determine the level of self-regulation for each student and students with low self-regulation were isolated. An additional survey determined the types of homework, including delivery and grading method, most often completed by students who lack self-regulation. Once the homework types, delivery methods and grading practices were ranked by the likelihood of completion, an analysis of variance (ANOVA) was used to determine the existence of a significant preference. Finally, the study had an action research design with an emphasis on high school students. The responding population from a small high school in Columbus, Ohio was the sample for this research. All students in the school were invited to participate and this research was designed to address the connection between homework and self-regulation within this population. A relationship between self-regulation skills and homework completion, as a whole, has already been determined (Bembenutty, 2011; Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011; Zimmerman, 1990). This examination provided more detail and extended the knowledge of this relationship to include types of homework.

The SRQ-A (Appendix C) provided strength of self-regulation capacity in this examination. The SRQ-A groups questions by four subscales: External Regulation, Introjected Regulation, Identified Regulation and Intrinsic Motivation (Ryan & Connell, 1989); listed in order of increasing self-regulation. The scores on each of these grouped questions are averaged to determine a subscale score. The subscale scores are then used in a formula to determine an overall Relative Autonomy Score (RAI) score: 2(Intrinsic) + Identified – Introjected –
RAI scores are presented on a continuum for each participant. The higher the RAI score, the higher the self-regulation.

All participants completed a survey about different types of homework most likely to be completed as seen in Appendix D. Participants were asked to rank, on a Likert-type scale, the likelihood of completion of the following types of homework: Skills practice, Preview/preparation, Skill application, Product production, Communication, Study skills development. Within the survey, examples of each type were given for clarification. This second survey also included how the student prefers to do homework: Online, Pencil and paper, and Video/multimedia based; and the influence of grading practices on completion: Checked for completion, Graded or checked for completion, or Graded.

Since this study focused on students who lack self-regulations skills, the responding students in the lower 50% of RAI scores were selected for analysis. Participants with a low RAI score had their preference rankings for homework type, homework delivery and grading practice compared via an ANOVA analysis. Particular attention was given to relationships between lower RAI scores and homework survey answers since the lower RAI score represents students with lower self-regulation. Significance of these relationships was determined using a p value <.05. Once significance was determined a Tukey-Kramer post-hoc test determined significant homework preferences.

**Participants**

This examination used an action research approach and all students in a small suburban high school within close proximity of a large metropolitan area, were invited to participate in this research. A total of 317 students were invited to the study using the entire school population as a potential sample. According to U.S. News & World Report (2013), this school is 95%
Caucasian, with the remaining 5% comprised of 1% Asian, 1% Black, 1% Hispanic and 2% from two or more racial backgrounds. Out of this total population, 52% are male, 48% are female, and 12% total economically disadvantaged. The U.S. News & World Report (2013) classifies this school as being in a Large Suburb setting without Title 1 funding.

As part of a needs assessment and a continuous improvement plan, this high school used a student clearinghouse in 2015 to determine how many of their graduates went on to a college or university and whether or not they persisted into their second year in a university or college. This project, presented in 2016 by the researcher to school administration, included six years of high school graduate data from 2010 to 2015 and used National Student Clearinghouse as a data exchange to verify graduate placement at over 3000 different colleges and universities. From this exchange, it was determined that at least 81.0% of graduates from this high school attend a two or four year institution in the fall following graduation. This is higher than the national average attending college of 66.9% over the same time frame, from 2010-2014 (United States Department of Labor, Retrieved 2016). This project by the researcher determined that approximately 68.1% of graduates from this school attend a four-year institution, 57.4% attend a public institution and 65.8% stay in-state. There are some gender differences in graduate data. A higher percentage of females attend a two or four year institution from this school: at least 82.3% of females and at least 76.6% of males. Graduates from this school from 2010 to 2013 had an average persistence rate of 87.8% from freshman to sophomore year in college (Lee, 2016). Persistence rates are determined by enrollment in a two or four year college anytime during the second year following graduation and not necessarily enrollment at the original institution. This analysis was limited to the colleges and universities that the National Student Clearinghouse works with and whether or not students waived their federal protection of student education.
records, the percentages given are minimums, as not all students attending an institution would have been captured (Lee, 2016).

**Instrumentation & Data Sources**

The self-regulation of students was determined following a design created by the researchers Ryan and Connell (1989). According to their website on Self-Determination Theory (SDT), the Academic Self-Regulation Questionnaire (SRQ-A) explores why a student does a behavior and then provides reasons that represent different styles of regulation or motivation (The Self-Regulation Questionnaires section, n.d.). This tool, created and used by Ryan and Connell in 1989, assisted in their study of causality and internalization (Perceived locus of causality and internalization: Examining reasons for acting in two domains). The quantitative scores for this questionnaire provide detailed scores in four subscales of self-regulation: external, introjected, identified, and intrinsic. Ryan and Deci (2000) further describe the results of the SRQ:

SDT differentiates types of behavioral regulation in terms of the degree to which they represent autonomous or self-determined (versus controlled) functioning. Intrinsic motivation is the prototype of autonomous activity; when people are intrinsically motivated, they are by definition self-determined. Extrinsically motivated activity, in contrast, is often more controlled (i.e., less autonomous). However, SDT differentiates types of extrinsic motivation in terms of the degree to which it has been internalized, suggesting that the more fully it is internalized and integrated with one’s self, the more it will be the basis for autonomous behavior (para.1).

The SRQ-A, first validated by Ryan and Connell in 1989 by the Validation Factor Analysis, was used for motivational study among high school students. In this study, the aggregate score on the
SRQ provided a scale for a student’s ability to self-regulate, which was used as the independent variable. The SRQ-A has been used in other studies, as well. In 1989, Grolnick and Ryan used it in their study, *Parent Styles Associated with Children’s Self-Regulation and Competence in School*. In 1993, Patrick, Skinner and Connell used it in *What Motivates Children’s Behavior and Emotion? Joint Effects of Perceived Control and Autonomy in the Academic Domain*. Again, in 1996, Miserandino, used it as the main instrument in *Children Who Do Well in School: Individual Differences in Perceived Competence and Autonomy in Above-Average Children*.

In order to determine the types of homework given and completed by students, students took a survey. The survey organized homework by intention as Sadlier (2010) identified: skills practice, preview/preparation, skill application, product production, communication, study skills development. This research took the work of Sadlier (2010) one step further by looking at two other aspects of homework: delivery and grading practice. This process eliminated some additional outside influences that could affect a student’s preference on the type of homework they complete. Students may complete homework based on delivery or method of completion rather than type. Because of this potential influence, the survey included homework method: online or pencil and paper. For the same reasons as homework method, the research included grading practice: checked for completion, graded, and not graded or checked.

In this research, the SRQ and the survey allowed for the researcher to focus on the types of homework most likely completed by students who lack self-regulation skills. Strong relationships that were found within one of these categories were further examined to show what type of homework may be used to help practice the skills these students are lacking.

**Data Collection Procedures**

Participants completed a two-part survey in one sitting (Appendix C & D). The first
The survey part is the SRQ-A used to determine self-regulations skills in the form of an overall RAI score, or relative autonomy index score. The second survey part determined types of homework most likely to be completed by the student. The second part of the survey also asked students about their preferred homework delivery and grading preferences. This two-part survey was presented to participants as one survey through school email and completed on school provided computers. The survey was given in October 2015 and data collected and analyzed by the primary researcher.

Each two-part survey took approximately 20 minutes to complete. The first part of the survey was estimated to take approximately 15 minutes and the second part was estimated to take approximately five minutes.

**Data Analysis**

At the completion of this study, all data was collected by the researcher and exported to Microsoft Excel and Stats Plus for inferential analysis. An ANOVA analysis was used to address each research question (Table 3).
Table 3

*Research Questions, Variables and Data Analysis*

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Independent Variable</th>
<th>Dependent Variable</th>
<th>Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. What types of homework do students who have poor self-regulation skills prefer to complete and is this influenced by gender?</td>
<td>Self-Regulation (RAI Score)</td>
<td>Types of Homework most likely to be completed</td>
<td>ANOVA</td>
</tr>
<tr>
<td>2. What homework delivery methods do students who have poor self-regulation skills prefer to complete and is this influenced by gender?</td>
<td>Self-Regulation (RAI Score)</td>
<td>Homework most likely to be completed by delivery method</td>
<td>ANOVA</td>
</tr>
<tr>
<td>3. Do grading policies affect homework completion by students with poor self-regulation skills and is this influenced by gender?</td>
<td>Self-Regulation (RAI Score)</td>
<td>Homework most likely to be completed by grading policy</td>
<td>ANOVA</td>
</tr>
</tbody>
</table>
Assumptions

Assumptions in this study include the honesty of the participants about the types of homework they complete and their motivations behind answering questions in class, completing homework and completing class work. It was assumed participants had the ability to understand the questions asked in the SRQ-A so as to appropriately answer these survey questions about their motivations. It was also assumed students understood the examples of each type of homework given so as to rank these homework types accurately. This study assumed extrinsically motivated students, by nature, self-regulate less and intrinsically motivated students self-regulate more as determined and classified by Ryan and Deci (2000). Most importantly, this study assumed students would gain self-regulation skills by practicing them in their preferred homework styles.
CHAPTER IV. RESULTS

The purpose of this study was to 1) identify the type of homework students with low self-regulation skills prefer to complete, 2) identify their preferred homework delivery method and 3) identify what grading policies encourage them to complete their homework. Students completed a two-part survey that first helped to identify their ability to self-regulate and then solicited feedback on their homework preferences. These results were also examined for any affects of gender on these preferences. Out of 317 high-school students invited to participate in this research, 110 responded with permission forms and completed the online survey for a response rate of 34.70%. The results from this two-part survey are included in this chapter (Appendix C & D).

Characteristics of the Sample

The sample population came from a small suburban high school within close proximity of a major metropolitan area in the Midwest United States. 317 total students were in attendance at the time of the survey; 151 male (47.63%) and 166 female (52.37%) and their ages ranged from 14 to 18 years. Out of these 317 students, 74 (23.34%) were freshmen, 84 (26.50%) were sophomores, 90 (28.39%) were juniors and 69 (21.77%) were seniors. Out of the 110 students that responded to the survey, 59.09% were female and 40.90% were male as shown in Table 4. These gender demographics are within 6.70% of the original population.

Each of the responding students filled out an SRQ-A (Self-Regulation Questionnaire – Academic). This allowed for a sub-score to be calculated in four different areas of self-regulation: intrinsic, identified, introjected, and extrinsic. These four sub-scores were then combined in an overall Relative Autonomy Index (RAI) score for each student using the
equation: $2(\text{intrinsic score}) + (\text{identified score}) - (\text{introjected score}) - 2(\text{extrinsic score})$. The allowable range for an RAI score is from a high regulation score of 20 to a low score of -55.

Table 4

*Descriptive Statistics of Responding Students*

<table>
<thead>
<tr>
<th>Class</th>
<th>Male</th>
<th>Female</th>
<th>% Of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>3</td>
<td>6</td>
<td>2.84 %</td>
</tr>
<tr>
<td>Sophomore</td>
<td>12</td>
<td>15</td>
<td>8.52 %</td>
</tr>
<tr>
<td>Junior</td>
<td>19</td>
<td>32</td>
<td>16.09 %</td>
</tr>
<tr>
<td>Senior</td>
<td>11</td>
<td>12</td>
<td>7.26 %</td>
</tr>
<tr>
<td>Totals</td>
<td>45</td>
<td>65</td>
<td>34.70 %</td>
</tr>
</tbody>
</table>

*Note: Total population at time of study = 317, 166 female and 151 male*

Table 5

*RAI Scores of Responding Students by Gender*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Median RAI Score</th>
<th>Mean RAI Score</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>-27</td>
<td>-25.54</td>
<td>-52 to 12</td>
</tr>
<tr>
<td>Male</td>
<td>-16</td>
<td>-19.96</td>
<td>-53 to 1</td>
</tr>
<tr>
<td>Totals</td>
<td>-23</td>
<td>-23.25</td>
<td>-53 to 12</td>
</tr>
</tbody>
</table>

*Note: Total population at time of study = 317, 166 female and 151 male*
The responding students had an average RAI score of -23.25, a median of -23, and a range from -53 to 12. Female respondents had a lower average RAI and median RAI score than male respondents although their range was wider as seen in Table 5. Since the focus of this research was on students with low self-regulation, the students with scores in the lower 50% were selected for analysis. The selected students with a lower RAI score had a RAI mean score of -34.58, a median score of -33 and a range from -23 to -53. Of these students, 70.90% were female and 29.09% were male as seen in Table 6.

Table 6

*Descriptive Statistics of Students with Low RAI Scores*

<table>
<thead>
<tr>
<th>Class</th>
<th>Male</th>
<th>Female</th>
<th>% Of Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshmen</td>
<td>2</td>
<td>4</td>
<td>8.11 %</td>
</tr>
<tr>
<td>Sophomore</td>
<td>6</td>
<td>5</td>
<td>13.10 %</td>
</tr>
<tr>
<td>Junior</td>
<td>2</td>
<td>21</td>
<td>25.56 %</td>
</tr>
<tr>
<td>Senior</td>
<td>6</td>
<td>9</td>
<td>21.74 %</td>
</tr>
<tr>
<td>Totals</td>
<td>16</td>
<td>39</td>
<td>17.35 %</td>
</tr>
</tbody>
</table>

*Note:* Students with RAI scores in the lower 50th percentile of the original sample were included for analysis

**Instrument Validity and Reliability**

The SRQ-A is the questionnaire used in this research. It was created by Ryan and Connell and was first validated by in 1989 by the Validation Factor Analysis. The SRQ-A is domain-specific and geared toward use in the academic field (Ryan and Deci, 2016). It has been
used to assess individual regulatory styles in the form of four categories: intrinsic, identified, introjected, and extrinsic. The questionnaire asks the respondent why they do a certain classroom behavior due to several different preselected reasons such as, “Why do I do my homework?” and “Why do I try to answer hard questions in class?” There are eight preselected reasons for each task: So that the teacher won’t yell at me, Because I want the teacher to think I’m a good student, Because I want to learn new things, Because I’ll be ashamed of myself if it didn’t get done, Because it’s fun, Because that’s the rule, Because I enjoy doing my classwork, and Because it’s important to me to work on my (task). Each answer has a score from 1 to 4, depending on the answer: Very true, Sort of true, Not very true or Not at all true. Each score is then placed in the appropriate regulation category.

Since it’s initial validation, the self-regulation questionnaires have been used in several other studies (Ryan and Deci, 2000). Grodnick and Ryan used it in their study in 1989, Parent Styles Associated with Children’s Self-Regulation and Competence in School. Patrick, Skinner and Connell used it in 1993, What Motivates Children’s Behavior and Emotion? Joint Effects of Perceived Control and Autonomy in the Academic Domain. Miserandino used it as the main instrument in the 1996 study, Children Who Do Well in School: Individual Differences in Perceived Competence and Autonomy in Above-Average Children.

**Research Question 1**

What types of homework do students who have poor self-regulation skills prefer to complete and is this influenced by gender?

The second part of the survey asked for respondents to rank their likelihood to complete six different types of homework: skills practice, preview/preparation, skill application, product production, communication, and study skills development. Each type of homework was ranked
from 1, most likely to complete, to 6, least likely to complete. Responses were then reverse
coded so that the preferred type of homework had the higher number. The mean scores, sum and
variance for each homework type as scored by the low RAI respondents and reverse coded are
included in Table 7. An ANOVA was performed on the results and at least one of the types of
homework was found to be statistically significantly ($p < .0001$) different than another, as shown
in Table 8.

Table 7

*Sum, Mean and Variance of Scores on Preferred Homework Types*

<table>
<thead>
<tr>
<th>Homework Types</th>
<th>Sum</th>
<th>Mean</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills Practice</td>
<td>272</td>
<td>4.95</td>
<td>1.72</td>
</tr>
<tr>
<td>Preview/Preparation</td>
<td>202</td>
<td>3.67</td>
<td>2.52</td>
</tr>
<tr>
<td>Skills Application</td>
<td>241</td>
<td>4.38</td>
<td>1.76</td>
</tr>
<tr>
<td>Product Production</td>
<td>240</td>
<td>4.36</td>
<td>2.68</td>
</tr>
<tr>
<td>Communication</td>
<td>199</td>
<td>3.62</td>
<td>3.57</td>
</tr>
<tr>
<td>Study Skills Development</td>
<td>225</td>
<td>4.09</td>
<td>3.01</td>
</tr>
</tbody>
</table>

*Note: Sample Size is 55. Types of homework ranked from 1, least likely to complete, to 6, most
likely to complete.*
Table 8

Preferred Homework Types for Students with Low RAI Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>5</td>
<td>63.47</td>
<td>12.69</td>
<td>5.25</td>
<td>0.0001</td>
</tr>
<tr>
<td>Within groups</td>
<td>321</td>
<td>776.11</td>
<td>2.42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>326</td>
<td>839.58</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ****p < .0001.

Responses on homework types were then divided between male and female selected respondents. As with the total sample, and ANOVA showed that both female and male students have a preferred homework type that is significantly different than another (p<.001) for female students and (p<.0001) male students as shown in Table 9.
Table 9

*Preferred Homework Types for Female vs Male Students with Low RAI Scores*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>5</td>
<td>49.51</td>
<td>9.90</td>
<td>4.51</td>
<td>0.0006</td>
</tr>
<tr>
<td>Within groups</td>
<td>227</td>
<td>498.35</td>
<td>2.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>232</td>
<td>547.86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>5</td>
<td>65.48</td>
<td>13.10</td>
<td>6.45</td>
<td>3.8 e-05</td>
</tr>
<tr>
<td>Within groups</td>
<td>88</td>
<td>178.73</td>
<td>2.03</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>244.21</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note:* ***p < .001. ****p < .0001.

The responses on the different types of homework were then analyzed by a Tukey-Kramer HSD post-hoc test to determine which types of homework were preferred significantly more than another. For the total selected sample, skills practice homework was significantly (p<.001) preferred over homework that previews material or includes communication tasks and had a mean difference of 1.27 and 1.26, respectively (See Table 10).
Table 10

*Tukey HSD: Preferred Types of Homework for Students with Low RAI Scores*

<table>
<thead>
<tr>
<th>Preferred Homework Type</th>
<th>Mean Score</th>
<th>Mean Diff</th>
<th>Q-critical</th>
<th>Tukey HSD</th>
<th>Tukey HSD p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills Practice</td>
<td>4.95</td>
<td>1.27</td>
<td>4.80</td>
<td>6.07</td>
<td>0.0010</td>
</tr>
<tr>
<td>Preview/Prep</td>
<td>3.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>3.62</td>
<td>1.33</td>
<td>4.80</td>
<td>5.98</td>
<td>0.0010</td>
</tr>
</tbody>
</table>

Note: ***p < .001.

Female students significantly (p<.01) prefer skills practice, product production and study skills homework over preview and preparation homework. Skills practice had a mean difference of 1.28 over preview, product production had a mean difference of 1.21 over preview and study skills had a mean difference of 1.15 over preview homework. Male students significantly (p<.01) prefer skills practice homework over product production, communication and study skills homework. The mean differences for these preferences over product production, communication and study skills homework is 1.81, 2.31 and 2.29, respectively. Male students also significantly (p<.05) prefer skills application homework over communication and study skills homework with mean differences of 1.56 and 1.54, respectively (See Table 11).
Table 11

*Tukey HSD: Preferred Types of Homework for Female vs. Male Students with Low RAI Scores*

<table>
<thead>
<tr>
<th>Preferred Homework Type</th>
<th>Mean Score</th>
<th>Mean</th>
<th>Q-critical</th>
<th>Tukey HSD Q</th>
<th>Tukey HSD p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skills Practice</td>
<td>4.92</td>
<td>1.28</td>
<td>4.82</td>
<td>5.40</td>
<td>0.0023</td>
</tr>
<tr>
<td>Product Prod</td>
<td>4.84</td>
<td>1.21</td>
<td>4.82</td>
<td>5.08</td>
<td>0.0053</td>
</tr>
<tr>
<td>Study Skills</td>
<td>4.79</td>
<td>1.15</td>
<td>4.82</td>
<td>4.86</td>
<td>0.0090</td>
</tr>
<tr>
<td><strong>Male</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skills Practice</td>
<td>5.00</td>
<td>1.81</td>
<td>4.92</td>
<td>5.09</td>
<td>0.0068</td>
</tr>
<tr>
<td>Product Prod</td>
<td></td>
<td>2.31</td>
<td>4.92</td>
<td>6.49</td>
<td>0.0010</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td>2.29</td>
<td>4.92</td>
<td>6.20</td>
<td>0.0010</td>
</tr>
<tr>
<td>Skills App</td>
<td>4.25</td>
<td>1.56</td>
<td>a 4.12</td>
<td>4.39</td>
<td>0.030</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td>1.54</td>
<td>a 4.12</td>
<td>4.16</td>
<td>0.046</td>
</tr>
</tbody>
</table>

*Note:* a 95% confidence. **p < .01. *p < .05
Research Question 2

What homework delivery method do students who have poor self-regulation skills prefer to complete and is this influenced by gender?

The second part of the survey also included asking respondents to rank their likelihood to complete homework based on its specific delivery method: online, pencil and paper, and video/multimedia. Each type of homework was ranked from 1, most likely to complete, to 3, least likely to complete. Responses were then reverse coded so that the preferred homework delivery had a higher number. The sum, mean and variance of these scores are included in Table 12. An ANOVA was performed on the results and at least one of the homework delivery methods was found to be significantly ($p < .0001$) different than another as shown in Table 13.

Table 12

*Sum, Mean and Variance of Scores on Homework Delivery Methods*

<table>
<thead>
<tr>
<th>Homework Delivery Method</th>
<th>Sum</th>
<th>Mean</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online</td>
<td>112</td>
<td>2.04</td>
<td>0.55</td>
</tr>
<tr>
<td>Pencil/Paper</td>
<td>147</td>
<td>2.67</td>
<td>0.41</td>
</tr>
<tr>
<td>Video/Multimedia</td>
<td>99</td>
<td>1.80</td>
<td>0.61</td>
</tr>
</tbody>
</table>

*Note:* Sample Size is 55. Homework delivery methods ranked from 1, least likely to complete, to 3, most likely to complete.
Table 13

*Preferred Homework Delivery for Students with Low RAI Scores*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2</td>
<td>20.98</td>
<td>10.49</td>
<td>20.71</td>
<td>9.9 e-09</td>
</tr>
<tr>
<td>Within groups</td>
<td>161</td>
<td>81.54</td>
<td>0.51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>163</td>
<td>102.51</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: ****p < .0001.*

Selected respondents were also analyzed by gender and it was found that female students and male students both had a significant preference (p<.0001, female. p<.05, male.) for at least one type of homework delivery method (See Table 14). As with the preferred homework types, a Tukey-Kramer HSD post hoc test was completed to determine where the differences between delivery methods existed.
Table 14

Preferred Homework Delivery for Female vs. Male Students with Low RAI Scores

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>2</td>
<td>23.99</td>
<td>11.99</td>
<td>29.30</td>
<td>5.6 e-11</td>
</tr>
<tr>
<td>Within groups</td>
<td>113</td>
<td>46.25</td>
<td>0.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>115</td>
<td>70.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>2</td>
<td>4.88</td>
<td>2.44</td>
<td>4.37</td>
<td>0.019</td>
</tr>
<tr>
<td>Within groups</td>
<td>45</td>
<td>25.13</td>
<td>0.56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>30.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ****p < .0001. *p < .05.

Table 15

Tukey HSD: Preferred Homework Delivery for Students with Low RAI Scores

<table>
<thead>
<tr>
<th>Preferred Homework Delivery</th>
<th>Mean Diff</th>
<th>Q-critical 99% Confidence</th>
<th>Tukey HSD</th>
<th>Tukey HSD p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pencil/Paper</td>
<td>0.64</td>
<td>4.18</td>
<td>6.63</td>
<td>0.0010</td>
</tr>
<tr>
<td>Online</td>
<td>2.67</td>
<td></td>
<td>2.04</td>
<td></td>
</tr>
<tr>
<td>Video/Multi</td>
<td>0.87</td>
<td>4.18</td>
<td>8.71</td>
<td>0.0010</td>
</tr>
<tr>
<td>Multi</td>
<td>1.80</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: ***p < .001.
After the post-hoc tests it was determined that overall, students significantly (p<.001) prefer pencil and paper homework over online and video/multimedia delivered homework by a mean difference of 0.63 and 0.84, respectively (See Table 15). Females significantly (p<.001) prefer pencil and paper homework over both online and multimedia delivered homework with a mean difference of 0.97 and 0.95, respectively. Male students had a different result in that they significantly prefer online delivered homework over video/multimedia delivery by a mean difference of 0.75. It is important to note that video/multimedia delivered homework was never chosen as an overall preference in any of the data analyzed as shown in Table 16.

Table 16

*Tukey HSD: Preferred Homework Delivery for Female vs. Male Students with Low RAI Scores*

<table>
<thead>
<tr>
<th>Preferred Homework Delivery</th>
<th>Mean Score</th>
<th>Mean Diff</th>
<th>Q-critical</th>
<th>Tukey HSD</th>
<th>Tukey HSD p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pencil/Paper</td>
<td>Online</td>
<td>0.97</td>
<td>4.20</td>
<td>9.51</td>
<td>0.0010</td>
</tr>
<tr>
<td>2.90</td>
<td>1.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Video/Multi</td>
<td>0.95</td>
<td>4.20</td>
<td>9.21</td>
<td>0.0010</td>
<td></td>
</tr>
<tr>
<td>1.95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online</td>
<td>Video/Multi</td>
<td>.75</td>
<td>a 3.43</td>
<td>4.01</td>
<td>0.018</td>
</tr>
<tr>
<td>2.31</td>
<td>1.56</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: a 95% confidence. ***p < .001. *p < .05*
Research Questions 3

Do grading policies affect homework completion by students with poor self-regulation skills and is this influenced by gender?

The effect of grading policies on homework completion was also addressed in the second section of the survey. Students were asked if they would complete homework if it was not graded or checked for completion, if it was checked or graded or only if it was graded. Under each category, students were able to choose: very true, sort of true, not very true and not at all true. Each response was coded 1 through 4 with 4 representing ‘very true’ and 1 representing ‘not at all’. The sum, mean and variance of each grading policy option can be found in Table 17. An ANOVA was performed and it was found that no statistically significant difference in the affect of grading policies existed for the overall student sample (Table 18). However, when male and female student responses were isolated, a statistically significant (p<.05) difference was found with male students but not with female students (Table 19). However, the female respondents p-value is approaching significance (p = 0.062). A Tukey-Kramer HSD post hoc test was used to determine the specific type of preferred homework grading policy for the male respondents.
Table 17

_**Sum, Mean and Variance of Scores on Homework Grading Methods**_

<table>
<thead>
<tr>
<th>Homework Delivery Method</th>
<th>Sum</th>
<th>Mean</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Graded or Checked</td>
<td>153</td>
<td>2.78</td>
<td>0.88</td>
</tr>
<tr>
<td>Only if Graded or Checked</td>
<td>145</td>
<td>2.64</td>
<td>1.16</td>
</tr>
<tr>
<td>Only if Graded</td>
<td>147</td>
<td>2.67</td>
<td>1.34</td>
</tr>
</tbody>
</table>

_Note:_ Sample Size is 55. Homework grading methods ranked from 1, ‘Not at all’, for homework completion, to 4, ‘Very true’ for homework completion.

Table 18

_**Preferred Homework Grading Policies for Students with Low RAI Scores**_

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>2</td>
<td>0.63</td>
<td>0.32</td>
<td>0.28</td>
<td>0.76</td>
</tr>
<tr>
<td>Within groups</td>
<td>162</td>
<td>182.22</td>
<td>1.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>164</td>
<td>182.85</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

_Note:_ p > .05, insignificant.
Table 19

*Preferred Homework Grading Policies for Female vs. Male Students with Low RAI Scores*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>2</td>
<td>6.62</td>
<td>3.31</td>
<td>2.85</td>
<td>0.062</td>
</tr>
<tr>
<td>Within groups</td>
<td>114</td>
<td>132.31</td>
<td>1.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>116</td>
<td>138.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>2</td>
<td>6.54</td>
<td>3.27</td>
<td>4.07</td>
<td>0.024</td>
</tr>
<tr>
<td>Within groups</td>
<td>45</td>
<td>36.13</td>
<td>0.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>42.67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: Female, p > 0.05 insignificant. Male, *p < 0.05.*

The post-hoc test results, as seen in Table 20, show a significant (p<.05) affect for graded or checked homework over not graded or checked on homework completion for males only. No other significant relationships existed for homework grading policies as presented in this survey.
Table 20

*Tukey HSD: Preferred Homework Grading Policies for Male Students with Low RAI Scores*

<table>
<thead>
<tr>
<th>Preferred Grading Policy</th>
<th>Mean Score</th>
<th>Mean Diff</th>
<th>95% Confidence</th>
<th>Tukey HSD</th>
<th>Tukey HSD p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graded or Checked</td>
<td>Not Graded or Checked</td>
<td>.81</td>
<td>3.43</td>
<td>3.63</td>
<td>0.036</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.13</td>
<td>2.13</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: *p* < .05.

Summary

Statistically significant differences were found in the preferences of different homework types for both gender and the overall selected sample. Skills practice homework is preferred over communication and preview/preparation homework in the overall selected sample. In the female selected sample, skills practice, product production and study skills homework were all preferred over preview/preparation homework. The selected male sample preferred skills practice homework over product production, communication and study skills homework. Males also preferred skills application homework over communication and study skills homework.

Statistically significant differences were also found in the preferences for homework delivery methods in the overall selected sample and both genders. Overall, the selected sample and female sample preferred the homework delivery method of pencil and paper over both online and multimedia delivery. The male selected sample differed in that they preferred online homework delivery over multimedia and did not have any significant preference for pencil and paper homework delivery.
The only category in this study not to have statistically significant different results is the effect of the homework grading policy on homework completion for the overall selected student sample. While the female student selected sample approached significance, the only significant result \( p<.05 \) was in the male selected sample. The male selected sample is more likely to complete homework that is checked or graded over homework that is not checked or graded. It should be noted that the overall selected sample was 70.90% female. This greatly influenced the overall student sample findings in all categories. Preferences by gender were found to be different in every category with significance.

Female and male student results have some shared preferences. Both genders preferred skills practice homework to other types of homework but not over the same types of homework. Females had more than one homework type preference over preview and preparation homework while males had more than one homework type preference over communication and study skills homework. Both females and males had homework delivery preferences over video and multimedia but not the same delivery methods were preferred.
CHAPTER V. CONCLUSIONS AND RECOMMENDATIONS

There is correlation between homework completion and academic success (Bembenutty, 2011; Cooper, Robinson, and Patall, 2006; Kitsantas & Zimmerman, 2009; Zimmerman, 1990). This connection isn’t just about time spent on homework, but rather the process of managing distractions, maintaining motivation, self-efficacy, setting goals, managing time, and self-reflection (Ramdass & Zimmerman, 2011, abstract). Application of these important skills is the concept of self-regulation. Without these skills, students may struggle because these skills are necessary for the successful completion of homework (Bembenutty, 2011; Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011; Zimmerman, 1990). Given the connection between homework and academic success, it is crucial to explore the needs and preferences of students who lack these important skills in order to help all students find academic success.

Academic success has lasting financial consequences since students who do not graduate from college are three times more likely to be unemployed than the students who do (Weissman, 2014). Helping students find academic success should be a priority for their future. There are other stakeholders of a student’s academic success than just students and their families, including school districts, administrators and teachers. Student learning objectives (SLOs) are required of all individual teachers in 23 states and in at least 14 of them, the teachers must track this data and submit it to their evaluators (U.S. Department of Education, 2014).

Researchers in the area of homework, academic success and self-regulation have called for a study to fill gaps across all grade levels in homework research and self-regulation processes, especially involving those students who lack self-regulation skills (Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011). Additionally, very little research exists within this area that includes any gender differentiation. There is a need for more information in
the area including of homework preferences of students who lack self-regulation skills so that teachers may find a way to help these students use their preferences as a conduit to develop self-regulatory practices.

This research filled a gap by exploring different types of homework preferred by students who lack self-regulation skills. The different types of homework examined were the same as categorized by Sadlier (2010): skills practice, preview, skills application, product production, communication and study skill development. This research also examined other potential homework preferences such as homework delivery method and homework grading policies. Homework delivery methods examined included pencil and paper, online and video/multimedia. This study sought to find the affect of grading policies on homework completion: not checked or graded, checked but not graded and checked and graded.

**Review of the Study**

This study was approached with an action research plan to determine the homework preferences of high school students who lack self-regulation skills in a small suburban high school in Ohio. According to The U.S. News & World Report (2013), this school is considered to be in a Large Suburb setting without Title 1 funding.

The total population of this school at the time of the study was 317 students, 53% male and 48% female. Out of the total population, 34.70% responded with parent permission forms, and of those respondents, 59.09% were female and 40.90% were male. Respondents were asked to complete a two-part survey including the Self-Regulation Questionnaire - Academic (SRQ-A) and questions about homework preferences. The first part of the online survey included the Self-Regulation Questionnaire, an academic version of what was first created and validated by Ryan and Connell in 1989. It was used in this study to determine the overall self-regulation skills of
the respondents in the form of a Relative Autonomy Index (RAI) score. Each respondent was then asked to rank six types of homework by how likely they were to complete each type. The second part of the survey then asked respondents about their preferred homework delivery method by asking them to rank how likely they were to complete homework delivered by each of the three methods presented. Finally, respondents were asked how likely they were to complete homework based on the grading policy of that homework.

Students with lower RAI scores, the lower 50% of the sample, were selected for further analysis. Of those selected, 70.90% were female and 29.09% were male. An ANOVA was run on the preference scores of the selected sample in order to find significance. All three categories, homework type, homework delivery and homework grading policy preferences, were found to have some type of significance at the gender level and two of the three categories were found to have significance in the overall combined gender sample. Tukey-Kramer post hoc tests were then performed to find specific preferences within each category for the overall combined gender group and at the gender level.

Discussion

Research Question 1.

What types of homework do students who have poor self-regulation skills prefer to complete and is this influenced by gender?

Of the six types of homework identified in the survey: skills practice, preview/preparation, skill application, product production, communication, and study skills development, a significant (p<.001) preference relationship was found in three of the six homework types for the low self-regulating (low RAI score) combined gender group. Four types of homework preference relationships were found to be significant (p<.01) in the low self-
regulating female group and five types of homework preference relationships were found to be significant ($p<.05$) in the low self-regulating male group. Overall, students with low RAI scores significantly preferred homework that practiced skills they had already been introduced to over homework that would preview upcoming material or included communication, such as to read a report or practice a written presentation to family members. The preferences for the low self-regulating combined gender group are summarized in Figure 1.

![Figure 1](image.png)

*Figure 1. Types of homework preferred by students who lack self-regulation. This figure illustrates the significant preferred homework types by mean survey score 1-6.*

This preference for skills practice homework, such as completing a worksheet on similar problems from class, may give students with low self-regulation some confidence when attempting completion. For a student who lacks self-regulation, knowing or being familiar with the material before attempting homework on the same subject provides an incentive to complete it when compared to trying something new, such as reading about a new topic before the class
has discussed it or watching a video about a new topic. A new topic may feel intimidating to students who lack self-regulation and they may not have the organizational skills or the ability to focus on something new without classroom or teacher support. They may also have a fear of failure without classroom or teacher support. These students who lack self-regulation also preferred skills practice to communication. Practicing homework on a familiar topic is more likely to be completed than communicating work to loved ones, or practicing work in front of others. This may make low self-regulating students feel self-conscious about their work so they opt for common homework maladaptive behaviors as described by Bembenutty: self-handicapping, procrastination, defensive pessimism, defective academic delay of gratification, misregulation, under-regulation and an over reliance on parents to process or make decisions on homework (2011). These maladaptive behaviors are what prevent students from homework success (Bembenutty, 2011). To avoid these behaviors and promote academic success, preview and communication homework should be avoided for these students and skills practice on familiar topics should be emphasized.

Out of the low self-regulating female group, skills practice, product production and study skills homework are all significantly preferred over preview and preparation type homework. Again, previewing material with which the student is unfamiliar may not provide the confidence for success or the motivation to seek out new information. Low self-regulating females may not have enough support to select appropriate learning strategies when exploring or learning new material independently. The low self-regulating male group significantly preferred skills practice to product production, communication, and study skills. They also preferred skills application homework, such as using skills from math class to solve a science problem or using writing skills to create a report in history, over communication and study skills type homework.
Communication and study skills were both a common type of homework less likely to be completed by males who lack self-regulation. Communication with others on projects or classwork may threaten the self-confidence of an adolescent male or increase a real or perceived tension in a relationship. The preference against study skills homework is consistent with the concept of low self-regulation because study skills homework includes the very self-regulation processes they clearly lack: organizing notes or a notebook for a class or creating a task list or timeline for a project.

**Research Question 2.**

What homework delivery method do students who have poor self-regulation skills prefer to complete and is this influenced by gender?

Three types of homework delivery methods were examined: online, pencil/paper and video/multimedia. Overall, a significant (p<.001) preference for pencil and paper homework delivery was found over both online and video/multimedia homework for students who lack self-regulation (See figure 2). This was also true for the low self-regulating female group but differed from the low self-regulating male group. It is important to recognize the preference for pencil and paper for the overall sample is greatly influenced by the 70.90% female preference for pencil and paper. The low self-regulating male group only significantly (p<.05) preferred online homework delivery to video or multimedia homework delivery. Both genders significantly preferred another delivery method to video/multimedia homework. This was an unexpected result due to the prevalence of video and multimedia information being consumed by adolescences. Students who lack self-regulation may need to separate their entertainment consumption of videos and other multimedia material from educational videos and multimedia.
material or perhaps lack the ability to delay gratification when the opportunity to watch videos arises and they choose to watch something with more entertainment value.

Figure 2. Types of homework delivery methods preferred by students who lack self-regulation. This figure illustrates the significant preferred homework delivery methods by mean survey score 1-3.

The preference for pencil and paper in the low self-regulating female group was an unexpected result of this research. The progression and integration of technology in the classroom and everyday lives of students was expected to provide motivation to complete homework. This result should not be interpreted as female students’ general lack of interest in technology, but perhaps using technology in this way makes it too difficult for students who lack self-regulation to focus on the responsibility of homework. With this challenge, other maladaptive behaviors such as defective academic delay of gratification or misregulation may become too much for these students to overcome.
The low self-regulating male group preferred online homework delivery to video/multimedia homework. In this researcher’s experience, many online homework programs provide instant feedback to the user. Online quizzes and tests are often multiple choice or are presented in a survey-type format where users can submit answers and get immediate feedback. These programs can quickly grade online homework and present the user with a score. Users often get positive feedback on correct answers or explanations as to why other answers were incorrect. This immediate feedback is not only a common component of effective formative assessments for learning in the classroom but it also supports the ideas presented by Juliani, author and Education and Technology Innovation Specialist. He says in his blog that the ‘On Demand’ generation, currently in our K-12 classrooms, are not used to waiting for information as the generation before them (Retrieved, 2016). Technology has brought students instant communication through cell phones, instant television shows and movies through online services and instant anything-web-based, anytime, anywhere on various personal electronic devices. This technological environment of the “on demand” generation is a logical homework preference for students who are not skilled on delayed gratification or don’t maintain motivation over a period of time. This research result of preferred online homework appears to be a logical progression and connection to lack of self-regulation.

**Research Questions 3.**

Do grading policies affect homework completion by students with poor self-regulation skills and is this influenced by gender?

The research in this study was expected to show that graded homework assignments are more likely to be completed: a homework grade provides enough motivation to the students who lack self-regulation skills to complete their homework. The result for this portion of the study
was unexpected for the low self-regulating female group and the overall combined gender sample. The combined gender sample and the low self-regulating female group did not have any significant preferences in this area although the low self-regulating female group was approaching significance (p=.062). The only significant (p<.05) preference in homework grading policies was with the low self-regulating male group. The low self-regulating male group is more likely to complete homework if the homework is checked or graded to if it is not checked or graded. This was the result expected for all groups since a grade has been known to provide motivation for some students. This may be due to praise from teachers or praise from parents, or even self-praise, but it may provide the motivation for low self-regulating males to complete more homework.

Grading practices vary from school to school and teacher to teacher. The teachers from the school in which this research sample was taken usually do not include a high percentage of homework grades in their overall course grades. The reason behind this decision is based on the district policy in which the grade for a course should represent the knowledge of the course as much as possible and not be watered down by a student’s ability to do homework. For example, if a student knows chemistry at an A level but doesn’t do homework, the grade for the course should still be an A and represent the student’s content knowledge of the course. If the teachers at this school grade homework at all, it usually has little affect on the overall grade for each class. The result for the low self-regulating female group that grading policy has no affect on homework completion would support the district’s policy regarding graded homework; it doesn’t increase motivation and does not necessarily represent a student’s individual skill level in any particular content area.
Conclusion

Students with low-self regulation in this study have homework preferences that make them more likely to complete it. These types of homework, homework delivery methods and grading policies can be used as tools to develop the skills they lack. Self-regulation is very important to academic success (Kitsantas & Zimmerman, 2009; Randass & Zimmerman, 2011; Schunk & Zimmerman; 1996; Zimmerman & Bandura, 1994; Zimmerman & Kitsantas, 2014; Zimmerman & Schunk, 2001) and it is a teacher’s responsibility to help increase the chance for success for the students who lack these important skills. Out of this combined gender group of students who lack self-regulations skills, skills practice homework is more likely to be completed over homework that previews new material or requires the student to communicate their work to others. This group of students prefers pencil and paper homework delivery method but grading policy does not significantly affect the likelihood of completion.

The low self-regulating female group from this study is more likely to complete skills practice, product production and study skills homework over homework that previews unfamiliar material. This female group also prefers pencil and paper homework delivery method and there is no significant relationship between the likelihood to complete homework and the grading policy of the homework.

The low self-regulating male group from this study prefers skills application and skills practice homework to homework that includes communication of their work or homework that includes study skills development. This group also prefers skills practice to product production homework. The low self-regulating male group is more likely to complete homework if it graded or checked as opposed to not being graded or checked.
Recommendations

These finding suggest that certain types of homework are likely to be completed by students who lack self-regulation skills. Since these students feel more compelled to complete these types of homework, teachers should incorporate specific self-regulation learning strategies into these types of homework in order to encourage the development of the self-regulation skills these students need in order to find academic success. For example, a skills practice worksheet over material presented in class that includes setting goals or selecting appropriate learning strategies in order to solve a problem can be used to help incorporate self-regulation skills into a homework type most likely to be completed. As presented earlier, Ramdass and Zimmerman (2011) state, “Evidence from experimental studies shows that students can be trained to develop self-regulation skills during homework activities” (abstract). In general, skills practice type homework is recommended for the development of these skills. For gender specific recommendations, skills practice, product production or study skills development type homework should be used and for females who lack self-regulation and skills practice and skills application homework should be used for low self-regulating males.

It is important for teachers to understand their students to the best of their abilities. They should understand their student’s strengths, weaknesses and preferences. Understanding how their students learn helps to increase the effectiveness of learning in the classroom. Since the low self-regulating female group in this study prefers to complete pencil and paper homework and the low self-regulating male group prefers online homework, it may be helpful to the students who lack self-regulation skills to have the option to attempt or use both. Flexibility on the part of the teacher along with allowing students to choose their own homework option will most likely increase completion rates. Since the successful completion of homework leads to
academic success (Bembenutty, 2011; Cooper et al., 2006; Kitsantas & Zimmerman, 2009; Zimmerman, 1990), including these homework options will help increase the chance for success for those students who lack self-regulation skills.

If a grade is not enough to encourage low self-regulating female students to do their homework, then why grade their homework? This practice does not significantly improve the likelihood they will complete it. This does, however, increase the likelihood of low self-regulating male students to complete their homework. If the teachers only graded low self-regulating male students’ homework so that they will complete more of it and not the female students’ homework, this could become extremely controversial. For the benefit of the low self-regulating male students, it would be best for teachers to grade or check homework on a regular basis even though it would not provide more incentive to the low self-regulating female students. This practice may result in improved academic success for low self-regulating males and worth the trouble to do so even though it most likely will have no significant improvement for low self-regulating females.

Best practice would suggest that students should be well versed in all types of homework. The specific types of homework preferences discussed here should be used to build self-regulation skills and widen the range of homework abilities. Self-regulation is needed for homework success (Bembenutty, 2011; Kitsantas & Zimmerman, 2009; Ramdass & Zimmerman, 2011; Zimmerman, 1990). Once students increase their self-regulation skills, they may be able to expand their ability to complete more types of homework successfully.

**Future Research Opportunities**

Researchers can use the information in this study and broaden the population sample in order to increase the generalizability of the results. If other schools are included in the study,
these results could show a trend worth investigating. Although the findings of this study were significant in that it helps researchers to understand there are different preferences among students who lack self-regulation skills, it does not confirm or provide information behind the motivations for these preferences. This would be an appropriate area of explorations so as to better understand their choices and how it relates to their lack of self-regulation. This researcher can only make predictions about the reasons or motivations behind their preferences. For example, it is worth exploring whether or not educational videos and multimedia material is not exciting and interesting enough when compared to the entertainment equivalent.

Although grade point average (GPA) of the participating students was not included in this study, an opportunity exists to explore the relationship between GPA and self-regulation and how GPA may be different between students who lack self-regulation and students who do not. Intelligence quotient (I.Q.) was also not addressed here. Previous research found student self-regulation could not predict cognitive competence (Garner & Waajid, 2012) however, a significant relationship may exist with their I.Q. scores.

The greatest opportunity for future research in regards to this study is pursuing the gender differences among students who lack self-regulation. Although some results here had common findings between genders, every category studied here had gender differences specific to students who lack self-regulation. It would be beneficial to better understand the influence of gender so as to better modify homework and other classroom practices and policies to help them to develop the self-regulation skills they need for academic success.
REFERENCES


APPENDIX A: IRB Approval

Institutional Review Board

Date: September 28, 2015

To: Dr. Gwynne Rife

CC: Jo Lee

RE: Using Homework to Teach Self-Regulation

Project Expiration date: September 28, 2016

The University of Findlay Institutional Review Board (IRB) has completed its review of your project utilizing human subjects and has granted authorization. This study has been approved for a period of one year only. The project has been assigned the number 940.

In order to comply with UF policy and federal regulations, human subject research must be reviewed by the IRB on at least a yearly basis. If you have not completed your research within the year, it is the investigator’s responsibility to ensure that the Progress Report is completed and sent to the IRB in a timely fashion. The IRB needs to process the re-approval before the expiration date, which is printed above.

Understand that any proposed changes may not be implemented before IRB approval, in which case you must complete an Amendment/Modification Report.

Following the completion of the use of human subjects, the primary investigator must complete a Certificate of Compliance form indicating when and how many subjects were recruited for the study.

Please refer to the IRB guidelines for additional information. This packet can be obtained within blackboard under community section. Please note that if any changes are made to the present study, you must notify the IRB immediately. Please include that number on any other documentation or correspondence regarding the study.

Thank you very much for your cooperation. If you have any questions, please feel free to contact IRB at (419) 434-4640 or email irb@findlay.edu.

Sincerely,

Jennifer Fennema-Bloom, Ed.D.
Chair, Institutional Review Board

Cc: IRB Office
APPENDIX B: Invitation to participate in the study

Dear <student name>: 

You have been selected to participate in study that will help us learn more about self-regulation skills, such as setting goals, selecting appropriate learning strategies, maintaining motivation, engaging in self-monitoring, and evaluating academic process. We are interested in this information so as to help students who lack these skills so that they may be successful academically. The results of this study are very important to us but your participation is voluntary and your responses are completely confidential.

If you agree to join this study, you will be asked to complete one combined survey set. The first survey part is meant to determine levels of self-regulation and the second survey part determines types of homework completed by the student and potential motivation behind completion. Both parts will be presented at the same time to the subjects online and eliminates the need to identify any respondent individually. Each participant will invest approximately 20 minutes of time. The first part time estimate is 15 minutes. The second part time estimate is 5 minutes.

We encourage you to participate in this study through this online survey link:

If you have any questions, concerns or problems, please contact Jo Lee at lee.joellen@gmail.com or Dr. Gwynne Rife at rife@findlay.edu.

Thank you, very much for your consideration.

Sincerely,

Jo Lee
APPENDIX C: SRQ-A Survey; Part 1 Student Survey

WHY I DO THINGS Age: ___________ Grade: _____________ ( ) Male or Female ( )

A. Why do I do my homework?

1. Because I want the teacher to think I’m a good student.
   
   Very true    Sort of true    Not very true    Not at all true

2. Because I’ll get in trouble if I don’t.
   
   Very true    Sort of true    Not very true    Not at all true

3. Because it’s fun.
   
   Very true    Sort of true    Not very true    Not at all true

4. Because I will feel bad about myself if I don’t do it.
   
   Very true    Sort of true    Not very true    Not at all true

5. Because I want to understand the subject.
   
   Very true    Sort of true    Not very true    Not at all true

6. Because that’s what I’m supposed to do.
   
   Very true    Sort of true    Not very true    Not at all true

7. Because I enjoy doing my homework.
   
   Very true    Sort of true    Not very true    Not at all true

8. Because it’s important to me to do my homework.
   
   Very true    Sort of true    Not very true    Not at all true

B. Why do I work on my classwork?

9. So that the teacher won’t yell at me.
   
   Very true    Sort of true    Not very true    Not at all true

10. Because I want the teacher to think I’m a good student.
11. Because I want to learn new things.
   Very true Sort of true Not very true Not at all true

12. Because I’ll be ashamed of myself if it didn’t get done.
   Very true Sort of true Not very true Not at all true

13. Because it’s fun.
   Very true Sort of true Not very true Not at all true

14. Because that’s the rule.
   Very true Sort of true Not very true Not at all true

15. Because I enjoy doing my classwork.
   Very true Sort of true Not very true Not at all true

16. Because it’s important to me to work on my classwork.
   Very true Sort of true Not very true Not at all true

C. Why do I try to answer hard questions in class?

17. Because I want the other students to think I’m smart.
   Very true Sort of true Not very true Not at all true

18. Because I feel ashamed of myself when I don’t try.
   Very true Sort of true Not very true Not at all true

   Very true Sort of true Not very true Not at all true

20. Because that’s what I’m supposed to do.
   Very true Sort of true Not very true Not at all true
21. To find out if I’m right or wrong.
   Very true   Sort of true   Not very true   Not at all true

22. Because it’s fun to answer hard questions.
   Very true   Sort of true   Not very true   Not at all true

23. Because it’s important to me to try to answer hard questions in class.
   Very true   Sort of true   Not very true   Not at all true

24. Because I want the teacher to say nice things about me.
   Very true   Sort of true   Not very true   Not at all true

D. Why do I try to do well in school?

25. Because that’s what I’m supposed to do.
   Very true   Sort of true   Not very true   Not at all true

26. So my teachers will think I’m a good student.
   Very true   Sort of true   Not very true   Not at all true

27. Because I enjoy doing my school work well.
   Very true   Sort of true   Not very true   Not at all true

28. Because I will get in trouble if I don’t do well.
   Very true   Sort of true   Not very true   Not at all true

29. Because I’ll feel really bad about myself if I don’t do well.
   Very true   Sort of true   Not very true   Not at all true

30. Because it’s important to me to try to do well in school.
    Very true   Sort of true   Not very true   Not at all true

31. Because I will feel really proud of myself if I do well.
<table>
<thead>
<tr>
<th>Very true</th>
<th>Sort of true</th>
<th>Not very true</th>
<th>Not at all true</th>
</tr>
</thead>
</table>

32. Because I might get a reward if I do well.
APPENDIX D: Part 2 Student Survey

A. What types of homework do I complete?

1. Rank the following types of homework in order of likelihood to complete: 1 being most likely to complete and 6 being least likely to complete. Leave blank if you are unsure.

____ Skills practice – practicing skills already covered in class and in the same context. Example: Complete a worksheet practicing similar problems from class.

____ Preview/Preparation – acquiring knowledge of a subject prior to covering the topic in class. Example: Read about a new topic before your class has discussed it or watch a video about a new topic

____ Skill application – applying skills covered in class to a new topic, context or problem. Example: Use skills from math class to solve a science problem or use writing skills to create a report in history

____ Product production – producing a project as a combination of several concepts and or skills. Example: Create a video to cover a specific topic from class or make a model to represent something.

____ Communication – communicating class activities to parents, guardians or other stakeholders. Example: Read a report or practice a presentation you have written to family members.

____ Study skills development – organizing work, instruments, tasks or schedule. Example: Organize notes or a notebook for a class or create a task list or timeline for a project.

B. How do I prefer to do my homework?

2. Rank the following types of homework in order of likelihood to complete: 1 being most likely to complete and 3 being least likely to complete. Leave blank if unsure.

____ Online (web-based)

____ Pencil and paper

____ Video/multimedia based

C. How does grading affect homework completion?

3. I complete my homework even when it isn’t graded or checked for completion.

   Very true      Sort of true    Not very true   Not at all true

4. I only complete my homework if it is being graded or checked for completion.
5. I only complete my homework if it is being graded.