

# Self-regulation and the motivation to achieve

A quantitative study on the effects of self-regulation strategies and motivation on learning English at an upper secondary school in Sweden

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## **Abstract**

The Swedish National Agency for Education recently begun explicitly promoting teaching through self-regulation strategies in national steering documents intended for teachers, following a number of other countries world wide (Skolverket, 2012; LGY 11; Dalland & Klette, 2016). The goal of self-regulation strategies is for the students to take control of their own learning process, and though there is research on the benefits of self-regulation strategies and motivation, these ideas are based on abstract concepts and biological processes in the brain, that are very difficult to measure (Zimmerman, 1990; Hattie, 2012; Simpson & Balsam, 2016; Schumann, 2004). As such, more research on these strategies is warranted, and little has been done to evaluate their effects on Swedish upper secondary school students. Consequently, the purpose of this study was to attempt to operationalize the theoretical concepts of self-regulation strategies in order to calculate the correlation between students perceived usage of self-regulation strategies, and English performance, with a special focus on motivation. This was done by operationalizing motivation and self-regulation strategies into six variables based on previous research, and then surveying 40 English 05 (year one) students at Enskilda Gymnasiet upper secondary school in Stockholm, and then running correlation tests with their grades from a grammar test the week after the survey, as well as with their overall grade from the previous year. The results showed almost no statistically significant correlations between the students' grades, and the students self-reported usage of self-regulation strategies. The exception was a statistically significant positive correlation between high levels of intrinsic motivation and good grades. The causes of these results are not specified within the parameters of this research project, however, it could be that there simply were no correlations between the perceived usage of self-regulation strategies and performance due to the strategies not having an effect on performance, or because the strategies were not being used properly. However, it could also be that the operationalizing of the variables in the questionnaire did not generate accurate levels of usage of these strategies. Either way, the results of this essay stress the need for further research that evaluates the effect of self-regulation strategies and motivation on learning English.

## **Keywords**

Self-regulation, self-assessment, self-monitoring, autonomy, second language learning, motivation.

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# 1. Introduction

## 1.1 Background & Research project

Self-regulation strategies in second language teaching and learning are a mix of cognitive approaches and learning techniques, which the Swedish National Agency for Education has begun promoting, similarly to several other countries around the world (Skolverket, 2012; LGY, 11; Dalland & Klette, 2016). Self-regulation strategies consist of a combination of different methods, aimed at letting the students take control of their own learning process by thinking about what, and how to learn, for example, by self-assessing, becoming aware of intended learning outcomes, conducting metacognitive reflections, and monitoring the learning process (Sautelle et al., 2015; Zimmerman, 1990; Skolverket, 2012; Hattie, 2012; Raofi et. al., 2013). Motivation is also an essential component of self-regulation strategies, as it is a necessity for the students to want to take control of the learning process (Rieser et al., 2016). Although there has been research on the benefits of self-regulation strategies and motivation, due to there being so many different neurological mechanisms in the mind that work with second language acquisition, it is both difficult to single out specific mechanisms, and to measure their effects (Zimmerman, 2000; Schumann, 2004; Hall & Goetz, 2013; Ryan & Deci, 2000; Dörnyei, 2014).

With this in mind, although the Swedish National Agency for Education has promoted self-regulation strategies for a number of years, almost no research has been done by attempting to operationalize the theoretical concepts explaining how self-regulation strategies and motivation work, and then measuring their effect in areas of performance regarding English proficiency amongst Swedish school students. Consequently, there is a need for more research within the field that attempts to convert these theoretical concepts into measurable variables, i.e. operationalize these concepts, in order to measure their effects. Therefore, this research project will attempt to operationalize these abstract concepts by surveying 40 students at an upper secondary school in Stockholm on their perceptions of these concepts, in order to investigate the correlation between the students self-reported usage of self-regulation strategies, and performance, with a special focus on motivation. This study will focus on both general English performance and grammar proficiency, as it traditionally has been considered a dull or difficult component of English by students, according to Estling-Vannestål (2007).

## **1.2 Purpose**

This essay will attempt to operationalize the abstract theoretical concepts behind self-regulation strategies, in order to investigate the correlation between perceived usage of self-regulation strategies and performance, with a special focus on motivation, on 40 English 05 students at Enskilda Gymnasiet upper secondary school in Stockholm.

## **1.3 Hypothesis**

According to Zimmerman (2000), Hedge (2014), Hattie (2012) and Bol, et al. (2015), there are numerous benefits of using self-regulation strategies, as such, the hypothesis of this essay is that there are some correlations between the students' perceived levels of motivation and other self-regulation strategies, and general performance and grammar proficiency. However, as language learning involves several different mechanisms in the mind, students may still be able to get good grades regardless of perceived levels of some self-regulation strategies or motivation.

## **1.4 Research Questions**

1. To what extent does the level of extrinsic and intrinsic motivation correlate with general English performance and English grammar proficiency?
2. To what extent do the following four self-regulation strategies correlate with general English performance and English grammar proficiency, self-assessment, knowledge of intended learning outcomes, setting and achieving goals, and self-monitoring?

## **1.5 Previous research**

### **1.5.1 Motivation and theories on second language acquisition**

Motivation is the process that determines what a person wants to do and why, which is as much of a biological process as an underlying psychological process, affecting language learning in a wide variety of ways (Hall & Goetz, 2013). Thus, motivation, or why someone wants to learn a language, is a cornerstone in practically all classical theories of language acquisition such as the behaviorist theories of Skinner (1968), the sociocultural theories of Vygotskij (1934), as well as contemporary theories such as theories on self-regulation (William, 2011, Hattie, 2012; Zimmerman, 2000). Within socio-cultural theories, willingness to communicate (WTC) means that a person willing to learn will take risks and expand beyond the comfort zone of current knowledge and into new levels of proficiency (zones of proximal development) in social situations (through scaffolding),

making motivation to learn both an individual and collective phenomenon (Brown, 2007; Säljö 2005; Vygotskij 1934). In this sense, language acquisition is driven by the language learners, and the direction that they want to go, or in essence, where they are motivated to go (Mitchell, Marsden & Myles, 2013; Vygotskij 1934). Motivation is also essential in behaviorist theories, Skinner's (1968) classical operant conditioning can be seen as a form of motivating (promoting a certain behavior) through punishment or reward. More contemporary theories of second language learning, such as self-regulation theories, put emphasis on the role of motivation as directly necessary for success, since it aims at putting the learner in charge of the learning process, thus requiring a motivated student (Hattie, 2012; Sautelle et al., 2015; Zimmerman, 1990, Zimmerman, 2000, Hall & Goetz, 2013). In this sense, according to Masgoret & Gardner (2003), how a person experiences motivation consists of many different factors, such as persistence, attentiveness, level of enjoyment, etc., that add up to a form of goal oriented behavior. Furthermore, Masgoret & Gardner (2003) state that this goal oriented behavior not only creates a positive effect in how a person learns a language compared to someone who is not motivated, but also that it is a very dominant factor in second language learning.

Lastly, although motivation is a key component for successful second language acquisition according to many different theories on second language acquisition, the specific effects of motivation are difficult to measure due to the large number and variety of factors that affect us and our behavior, a very motivated student of a specific language might still fail in his or her attempts (Brown, 2007; Dörnyei, 2014; Lightbown & Spada, 2013).

### 1.5.2 Theories on motivation

From a strictly biological point of view, motivation is goal-oriented/needs-driven behavior through neurological activities as influenced by biological (for instance hormonal) & psychological factors, experiences, and contextual settings, that produce specific responses under different circumstances (Simpson & Balsam, 2016). Essentially, motivation as it occurs in the brain is a very complex process that involves several different biological systems in order to be explained (Simpson & Balsam, 2016). In other words, although motivation potentially can be steered towards reaching certain goals as proposed by self-regulation strategies, it is a phenomenon far too complex to simply



“control” or get access to. Thus, the term motivation in language learning situations is often simplified, for example, according to Dörnyei (2014), who claims that motivation is a complex and multi-dimensional subject which although hard to pin down, specifically defines why people do what they do, and their attitudes in so doing, or as Margaret & Gardner (2003) defines it, feelings that form goal-oriented behavior. However, Dörnyei (2001), also acknowledges that studies on motivation have shifted from being mainly quantitative to becoming more qualitative due to the complexity of the factors giving rise to motivation.

The research and theories on motivation by Ryan & Deci (2000) can be considered the standard of the contemporary scientific community within the field of second language acquisition (Noels, 2011; Dörnyei, 2001; Dörnyei, 2014). According to Ryan & Deci (2000), although motivation often is regarded as one specific thing, there are actually different forms of motivation stemming from why it occurs in the first place, called “*orientations*”. To further expand this claim, Ryan & Deci (2000) turn to so called *self-determination theory*, according to which the orientation of the motivation differs depending on whether the motivation stems from doing something because it is fun or gratifying in itself, or because a person desires a specific outcome. For example, according to this theory, the orientation and outcome of the motivation in a person trying to learn English grammar for fun (intrinsic motivation), compared to a person trying to learn English grammar out of fear of mistreatment if he or she does not (extrinsic motivation), will differ, especially as intrinsic motivation is considered to be much stronger (Ryan & Deci, 2000; Ortega, 2009).

According to Noels (2001), who is building on the theories of Ryan and Deci (2000), there are three subcategories of intrinsic motivation: Firstly, intrinsic knowledge, or feeling of satisfaction of gaining knowledge. Secondly, intrinsic accomplishment, or feeling of fulfillment by achieving something. And third, intrinsic stimulation, or doing something because it is enjoyable. In their research, Ryan & Deci (2000) have found that students’ intrinsic motivation for doing school work is derived from a mix of reasons, such as interest, level of fun, and enjoyment. Finally, according to Ortega (2009), due to the inherent and subconscious nature of intrinsic motivation, high levels of learner autonomy are a prerequisite for achieving high levels of intrinsic motivation. As such, for the purpose of this study, it should be noted the orientation of the motivation will be

affected by the fact that English 05 is an obligatory course, and grammar is obligatory content, taking away some of the students' autonomy.

Extrinsic motivation is conventionally defined as motivation originating from an external factor or outcome, such as a reward or a punishment (Ryan & Deci, 2000; Dörnyei, 2001; Noels, 2001). According to self-determination theory, extrinsic motivation can be placed on a continuum depending on how much the external motivational factors have been internalized (Ryan & Deci, 2000; Dörnyei, 2001; Noels, 2001). The first step is external regulation, in which the motivation is completely dependent on getting an external reward for doing something (Noels, 2001; Ryan & Deci, 2000). In the second step, introjected regulation, the orientation is still governed by external regulation, however, the individual has internalized the purpose of doing something. During the third step, identified regulation, a person might be motivated to do something not for the value in itself, but for another purpose, such as learning to drive better in order to help someone else (Noels, 2001; Ryan & Deci, 2000). In the last step, the extrinsic motivational factors become completely embraced by the self, and a person does something, neither for the rewards nor enjoyment, but rather, for the inherent and acknowledged value of doing it, and although not intrinsic motivation in itself, it resembles it (Noels, 2001; Ryan & Deci, 2000).

### 1.5.3 Self-regulation theory and strategies

Self-regulation theory and strategies on second language learning are essentially about letting the students set and achieve their own goals, and becoming aware of, and taking control of their own learning process in achieving these goals (Sautelle et al., 2015; Zimmerman, 1990; Zimmerman, 2000; Hattie, 2012). Zimmerman (1990; 2000) also explicitly points out the role of motivation as essential in self-regulation strategies, claiming that without motivation to achieve a valuable outcome, self-regulation is impossible, and according to Rieser et al. (2016), more motivated students tend to use self-regulation strategies to greater extents than less motivated students. Effectively, self-regulation strategy is based on a number of different strategies, such as metacognitive thinking, self-assessing, self-monitoring the learning process, and the understanding of intended learning outcomes, to make the learner steer emotionally, cognitively and motivationally towards achieving a goal (Sautelle et al., 2015; Zimmerman, 1990;

William, 2011). Hall & Goetz (2013), connect motivation, self-regulation and emotions as codependent and equally cognitively necessary, in second language learning. Ultimately, research on self-regulation strategies has indicated that it is a useful method of second language teaching and learning (Zimmerman, 2000; Hedge, 2014; Bol, et al., 2015).

In Sweden, following a number of different countries worldwide, the Swedish National Agency for Education (Skolverket, 2012) published a steering document concerning guidelines and strategies regarding student assessment to be used by teachers, which explicitly promotes the use of self-regulated learning strategies as part of one of the most fundamental skills for students to acquire, according to the curriculum (Lgy 11; Dalland & Klette, 2016). Furthermore, according to the curriculum regarding the universal skills that students are prescribed to develop, the essential methods of self-regulation are present, such as self-assessment, metacognitive thinking, self-reflection, self-monitoring, and understanding the intended learning outcomes, and purpose of studying (Lgy 11). This means that although the students might not explicitly be taught in how to use self-regulation strategies, they should still be explicitly taught how to use the strategies that self-regulation theory consists of. For example, according to Hedge (2014), self-assessment is a metacognitive strategy of language learning that can be used formally or informally in a variety of ways. However, according to Zimmerman (2000), and Dalland & Klette (2016), in order for self-regulation strategies to be efficient, they need to be taught explicitly, and the extent to which they have been taught in Swedish schools is unclear.

William (2011) highlights the advantages of student self-regulation and awareness of intended learning outcomes, by what he calls “success criteria”. According to William (2011), self-assessment is a part of self-regulation which students are not only generally good at, but which also directly affects how well they believe that they can perform, and how challenging the goals are perceived to be. The research of Beyer & Bowden (1997) analyzes the differences in self-evaluation, and self-perception between males and females regarding differently gendered tasks, and compares their performance. Their findings become interesting in light of so-called self-verification theory, according to which peoples’ self-conception of their own abilities leads them to perform accordingly, which, in other words, would mean that a student with low expectations possibly would

perform worse than if the student had had higher expectations (Beyer & Bowden 1997).

In conclusion, self-regulation theories consist of many different strategies and methods. For the purpose of this study, in addition to intrinsic and extrinsic motivation, the effect of the following four self-regulation strategies will be operationalized in order to calculate their correlation with performance: 1. Self-assessment, 2. Knowledge of intended learning outcomes, 3. Setting & achieving goals, and 4. Self-monitoring.

#### 1.5.4 Similar magister research projects

Näslund & Bengtsson-Svärd (2012) have conducted a similar magister research project on Swedish upper secondary school students' metacognitive proficiency in mathematics, by surveying students on their relationship and attitudes towards mathematics class, as well as the students' study habits, motivation and cognitive awareness. The study showed that students in general are not very motivated to study mathematics, but it leaves the reader wondering what the scientific contribution of the study is by establishing that Swedish students do not like mathematics (Näslund & Bengtsson-Svärd, 2012). Therefore, this study does not solely aim at describing the current state of student self-regulation, and motivation in English, but also to attempt to operationalize these concepts in order to to measure their effect.

## 2. Method

This section will begin with explaining the use of quantitative methods, questionnaires, and correlation. Further on, this section will describe the operationalization of the variables, that is how the variables will be attempted to be measured despite being complex, abstract, theoretical concepts.

### 2.1 Methodological decisions

This study will attempt to operationalize abstract theoretical concepts regarding self-regulation strategies and motivation, in order to measure their effect on performance. This will be done by quantitatively surveying 40<sup>1</sup> Swedish English 05 students between the ages of 15-17, a week before a grammar exam, and then by calculating the correlation between the students' perceived measurements of motivation and self-regulation strategies, and the students' grades. This method was chosen for two, reasons, the first being that in order to fully be able to measure the effects of these methods, there has to be a large enough number of participants, and by conducting a survey, a total of 40 students could participate in the project within the set time and length limitations. Secondly, with regard to the difficulties involved in tapping into the abstract concepts that make up self-regulation theory and motivation, one could argue that it is nearly impossible regardless of what method one uses. However, by attempting to operationalize the variables and letting the students evaluate themselves, and then calculating the correlation between perceived levels of using these methods and the students' grades, we should at least get a reliable indication on the effects of self-regulation strategies, provided that the variables were sufficiently operationalized.

In regard of representativeness, two upper secondary school year one classes were chosen in accordance with the principles of non probability - cluster sampling. According to Dörnyei (2007), although non probability sampling is not an optimal solution, it is applicable when necessary to yield valid results that are not to be generalized. Furthermore, to ensure sample reliability, representativeness and research validity, the

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<sup>1</sup> Originally 44, but 4 students withdrew due to improperly filling out the questionnaire, or missing the grammar test.

two classes consist of students from mixed study-orientations at Enskilda Gymnasiet upper secondary school in Stockholm, with two different teachers. Enskilda Gymnasiet is generally considered to be a good school, and having good grades is a prerequisite to get enrolled as a student. As such, the students are expected to perform well, however, with this in mind, it is still possible to investigate the effects of self-regulation strategies on the students, as their usage of self-regulation strategies should still be able to be measured relative to their performance. Furthermore, although both classes have worked with grammar, the grammar tests differ depending on the teachers' individual intended learning outcomes, however this should not have any impact on the outcome, as this research project will focus on the students' perceptions of their abilities, rather than the content of the tests. With statistical consideration and in accordance with Dörnyei (2007), the sample size is more than large enough to reach the necessary requirements to achieve validity for correlation tests, which requires a minimum of 30 participants in order to reach meaningful statistical significance. And although not large enough to render results that are generalizable on the whole population, the results will be able to indicate interesting trends. Furthermore, other than the difficulties involved in operationalizing the variables, three potential threats to the validity of this research can be identified. Firstly, there is a slight risk of students dropping out of the research project, due to choice, illness, or other unforeseen causes (Dörnyei, 2007). Thus, the base sample is large enough to withstand 25% attrition without losing validity for correlation tests in accordance with Dörnyei (2007). Secondly, there is always a slight chance of the Hawthorne effect, that the students respond differently because they know that they are a part of a study, due to the specific nature of this research (self-evaluation & performance) (Dörnyei, 2007). Finally, due to social desirability bias, students might feel inclined to self-evaluate themselves as better than they are when writing the questionnaire (Dörnyei, 2007). To counter this, the students are specifically instructed to answer truthfully, and that they have nothing to gain from not doing so. In conclusion, all the necessary steps to ensure representativeness in the sample group, as well as reliability and research validity for this research paper have been taken.

Due to the age of the participants (15-17), the ethical considerations for the survey and analysis have been taken in regard to the guidelines set by the Swedish research council (Vetenskapsrådet, 2002), Swedish law regarding ethical principles in human research (2003:460), and Dörnyei's (2007) principles on consent. In accordance with these

standards, voluntary research without physical or mental repercussions for research at a magister level on anonymous students of the age of 15 or older, does not require parental or guardian consent, as long as the students fully understand the purpose of the study, and are informed that they can decline or drop out of the study at any time. To ensure that these requirements were fulfilled, the students were specifically informed of the research project in advance, and received a thorough verbal account of the purpose and method before answering the questionnaire. Furthermore, the students were informed of the fact that participation was voluntary, and to participate the students were required to tick a consent box on the survey, giving them the opportunity to decline participation whilst remaining anonymous. Finally, the questionnaires were anonymous, and the students' individual grades were linked to the questionnaires anonymously by the two teachers, (using numerical codes), ensuring anonymity in all stages of the research process.

The correlation tests were conducted by applying a questionnaire with Likert scale items, that could be converted into numerical figures ranging from 1-5 or 1-6 (low - high). Essentially, the students were able to convey their perceived level of motivation and self-regulation into a numerical value. The students' grades were also transferred into a numerical value, ranging from F to A (1 - 6), making it possible to apply a Pearson product-moment correlation test (Dörnyei, 2007). The reference point of a statistically significant correlation for 40 participants is  $r > 0.263$  in accordance with Dörnyei (2007), and the online Pearson product-moment correlation calculator <http://vassarstats.net/textbook/ch4apx.html>. The correlation tests and the statistical significance was calculated in Excel, and with regard to the probability coefficient which according to Dörnyei (2007) is a value of at most  $p < 0.05$  required to indicate statistical significance. Finally, as is commonly known, correlation tests cannot say something is the cause of something else, only that there is a correlation between an independent and dependent variable (Dörnyei, 2007). By applying this method, this essay will yield results on the correlation between the students' perceived usage of self-regulation strategies, and performance.

Preferably, the questionnaire should have been piloted on a number of students in order to receive feedback, unfortunately, due to the difficulties in obtaining candidates, this had to be disregarded. Instead, before being administered, the questionnaire was piloted on three upper secondary school teacher candidates, and one elementary school teacher

candidate, as their insight into the teaching profession and students of the same age as the participants might be valuable.

## **2.2 Operationalizing the conceptual variables**

Schumann (2004) highlights the main difficulty when trying to operationalize and test the effect of specific abstract variables and cognitive mechanisms in second language acquisition, as having to make assumptions based on speculations to such an extent that it is difficult to actually identify and single out the effect. Therefore, this section will be dedicated to describing the methodological choices in operationalizing the independent variables while formulating the questionnaire, in order to enhance the validity of the research.

For the purpose of this study, six methodological independent variables related to the theories on motivation and self-regulation methods presented in section 1.5.2 and 1.5.3 will be operationalized in order to calculate their correlation with the dependent variables, that is, the students' grades from last year, and the students' grammar test grades.

- Intrinsic motivation.
- Extrinsic motivation.
- Self-assessment.
- Knowledge of intended learning outcomes.
- Setting & achieving goals.
- Self-monitoring.

To begin with, structuring a questionnaire needs to be done with regard to measurement validity in general, and in this case the questionnaire consists of factual items regarding the students' grades and effort put into studying, behavioral items regarding self-assessment, and attitudinal items regarding the students' level of motivation (Dörnyei, 2007). Every item consists of a statement and five or numerically coded ways for the participants to respond (1-5 or 1-6), most commonly ranging from: strongly agree to, strongly disagree. The items on the questionnaire have been written in strict consideration of Dörnyei's "Rules about item wording" (Dörnyei, 2007, 108-109), to avoid any and all



forms of misinformation and misinterpretation.<sup>2</sup> This makes the operationalizing of the variables a little bit more difficult since the questionnaire items need to be closed, easily interpreted by the students, and generalized (Dörnyei, 2007).

### 2.2.1 Dependent variables - grades

To be clear, correlation will be calculated between the six previously mentioned independent variables, and one, or both of the two dependent variables. The two dependent variables are the grades from the students' grammar test taken the week after being surveyed, and the students' general English grades from last year. The grades on the grammar exam will be acquired from the teachers who graded the exam, and the students' grades from last year will be acquired by asking the students on the questionnaire. In summary, the dependent variables are attained in the following way:

- (Questionnaire item number: 5.1) I got the following grade in English in högstadiet.
- Results from the grammar exam, provided by the teachers.

This way, one can calculate the correlation between perceived level of usage of self-regulation strategies before the students do the grammar test, and English grammar proficiency, as well as the students' perceived usage of self regulation strategies and the students' grades from last year.

### 2.2.2 Motivational variables:

As previously stated, motivation consists of implicit, and unconscious neurological processes, and as such, it is difficult to operationalize it and formulate questionnaire items that will accurately render precise data on the students' actual levels of extrinsic and intrinsic motivation (Simpson & Balsam, 2016). In addition, both intrinsic and extrinsic motivation need to be summarized into easily comprehensible questionnaire items, suitable to the age of the participants. Basically, no matter how these constructs are operationalized and questions are formulated, the level of motivation is not something that is necessarily directly accessible to begin with, and as such, it should be noted that this research project only measures the students' perceived level of motivation, by

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<sup>2</sup> See appendix A & B.

attempting to operationalizing abstract constructs through previous research.

### **2.2.2.1 Intrinsic motivation**

First of all, according to Ryan & Deci (2000), intrinsic motivation basically refers to the personal enjoyment and fulfillment, or “fun” of doing something, and to keep it generalized and relatable for the students, the following operationalizing for intrinsic motivation has been applied in the questionnaire:

- (Questionnaire item number: 2.1) I think it is fun to study English.
- (Questionnaire item number: 3.2) I think that it is fun to work with English grammar.

By ranking their opinion of thinking that English and English grammar is fun on a 5 point Likert scale ranging from “Strongly agree” to “strongly disagree”, we will get a numerical value of the students’ perceived levels of intrinsic motivation.

### **2.2.2.2 Extrinsic motivation**

Due to the complexities of self-determination theory, and the difficulties of self-evaluating level of motivation, for the purpose of this essay, extrinsic motivation will be defined conventionally, as motivation originating from an external factor or outcome, such as a reward or a penalty (Ryan & Deci, 2000; Dörnyei, 2001; Noels, 2001). Furthermore, according to Ortega (2009), the fact that the course (English 05) is obligatory, the students’ main sources of motivation to perform will be extrinsic as the level of learner autonomy is low. To test this notion, one of the classes that were surveyed got an additional open ended question on their questionnaire asking them: “What are your main sources of motivation to do well on the exam next week?”,<sup>3</sup> in which motivation was phrased as a neutral term. The result of the open ended questionnaire item showed that 17/19 students perceived their main source of motivation to be the pursuit of a good grade, or to appease their parents with a good grade, which can be considered as an extrinsic reward in accordance with Ryan & Deci (2000). In conclusion, this strongly indicates that a neutral phrasing of the word “motivation” refers specifically to extrinsic motivation. Thus, the following questionnaire items refer to extrinsic motivation:

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<sup>3</sup> See appendix B.

- (Questionnaire item number: 2.2) I am motivated to learn English.
- (Questionnaire item number: 3.1) I am motivated to work with English grammar.
- (Questionnaire item number: 5.3) My level of motivation should give me the following grade on the test.

As with intrinsic motivation, these questionnaire items will render a numerical value of the students' perceived levels of extrinsic motivation in general and regarding the grammar exam.

### 2.2.3 Self-regulation variables

The main difficulty in measuring the effects of self-regulation strategies according to Zimmerman (2000) is isolating the variables one wishes to measure, and then measuring their effects in relation to all other factors that potentially also affect the outcome. Due to the difficulties in operationalizing these variables, much of the research on self-regulation is qualitative. However, in order to contribute to the field of research on the effects of self-regulation strategies, this research project will apply a self-report questionnaire, in order to calculate how the students' perceived usage of these strategies correlate with their grades (Zimmerman, 2000). In terms of self-regulation, four strategies were operationalized in accordance with previous research, for the students to report their perceived level of usage of. The strategies were all recommended in accordance with the Swedish National Agency for Education (Skolverket, 2012; LGY 11). 1. Self-assessment. 2. Knowledge of intended learning outcomes. 3. Setting & achieving goals. 4. Self monitoring.

#### 2.2.3.1 Self-assessment

Self-assessment is a metacognitive self-regulation strategy that aims at making the learners aware of their own learning process, and to progress further towards the goals that have been set (Hedge, 2014; Bol, et al., 2015; Zimmerman, 2000). The students' abilities to self-assess themselves will be measured by letting them report what grades they expect to receive on the grammar exam, and at the end of the semester. These values can then be correlated to their grades on the grammar exam, and their grades from last year in order to measure the students' ability to self-assess themselves. Although there is no time to run correlation tests between the expected grades at the end of the semester, and the actual grades at the end of the semester, it still gives a numerical value on the

students' perceptions of their general English abilities (summed up in their final grade).

- (Questionnaire item number: 5.2) I expect to get the following grade in English 5.
- (Questionnaire item number: 5.4) I think I will get the following grade on the test

### **2.2.3.3 Knowledge of intended learning outcomes**

Understanding the intended learning outcomes is a prerequisite of being able to successfully apply self-regulation strategies, as the purpose is to make the learner take control of the learning process (Sautelle et al., 2015; Zimmerman, 1990; Zimmerman, 2000). All students are supposed to know the intended learning outcomes of their classes according to the Swedish National Agency for Education (Skolverket, 2012; LGY11). However, knowledge of intended learning outcomes is an abstract term, considering that the understanding of intended learning outcomes can vary, not only amongst the students, but also between the teacher and the students. Therefore, in operationalizing this concept, the intended learning outcomes is presented through multi item scales, both as something neutral and in reference to understanding the point of studying. As such, the questionnaire will measure how much students perceive themselves to understand the intended learning outcomes of the grammar test, rather than whether they actually do or not in reference to what the teacher wants them to. This measurement is still very relevant, as the students' perceived level of understanding the intended learning outcomes, is still something that might affect their performance.

- (Questionnaire item number: 2.4) I generally understand what it is that I am supposed to learn in English class.
- (Questionnaire item number: 3.3) I understand why I am working with English grammar.
- (Questionnaire item number: 3.4) I understand the intended learning outcomes (what I am supposed to learn) for the grammar test.

### **2.2.3.4 Setting and achieving goals, and self-monitoring**

Finally, as taking control of the learning process is at the heart of self-regulation strategies, setting and achieving goals, and self-monitoring (regulating the learning process) are essential to the successful application of self-regulation strategies (William, 2011; Sautelle et al., 2015; Zimmerman, 1990; Zimmerman, 2000). Furthermore, since

setting and achieving goals and self-monitoring are codependent, these variables will be operationalized and analyzed in the same section. In addition, the correlation between these variables and the students' performance will be specifically calculated on the grammar test grades only, as it is an upcoming event in comparison to the students' grades from last year. Setting and achieving goals are operationalized in item 4.1, and 4.2, whether or not the students' perceive themselves to know what they have to do in order to get the grade they want on the test, as well as if they believe that they are able to influence their grade by studying. Operationalizing self-monitoring is slightly more complicated as it is more of an abstract concept. However, by letting the students' evaluate their own efforts put into studying for the test, we should get a simplified numerical value of their levels of self-monitoring. Effort put into studying is a relative term depending on the student, however, the perceived level of effort put into studying is still relevant to the result, and whether or not it correlates with the results on the test.

- (Questionnaire item number: 4.1) I know what I have to do to get the grade that I want on the test.
- (Questionnaire item number: 4.2) I can influence my grade on the grammar test by studying.
- (Questionnaire item number: 4.3) I put effort into studying for the grammar test.

#### 2.2.4 Discarded questionnaire items

In addition, the following questionnaire items were disregarded due to them being warm up questions, or due to limitations in the research project.

- (Questionnaire item number: 1.2) I identify as a... (gender)
- (Questionnaire item number: 1.3) I am in the... (orientation/program)
- (Questionnaire item number: 1.4) My first language is... (English/Swedish/other)
- (Questionnaire item number: 1.5) I speak English outside of the classroom (Y/N)
- (Questionnaire item number: 2.3) I think it is important to learn English

As the methodology has been thoroughly accounted for, in the following section, the results of the questionnaire will be presented, as well as the Pearson's product-moment correlation calculations.

### 3. Results

#### 3.1 Grades

This section will begin with a short look at the students' grades from last year, and the grades from the grammar test. As seen in Table 1, the average grade from last year was reported to be 5.73/6 (approximately A), and the exam grade average was 5.1/6 (approximately B). And as seen in Table 2, the Pearson's correlation test showed no statistically significant correlation between the students' grades from last year (item 5.1), and the grades on the grammar test, ( $r = 0.243$ ,  $p > 0.05$ ).

**Table 1. Descriptive statistics of the students' grades.**

	N	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
5.1	40	5.73	6	6	0.506	4	6
Grammar test results.	40	5.1	5	5	0.797	4	6

**Table 2. Correlation tests on the grades.**

	5.1	Results
5.1	1	
Results	0.243	1

#### 3.2 Intrinsic motivation

If we begin with looking at the results from the questionnaire, in Table 3 it is noticeable that with an average value of 2.9/5 on the Likert scale, the students generally perceived grammar as something that they neither agreed to be fun, nor disagreed with being fun (item 3.2). However, most students reported that they thought that English in general was fun (item 2.1), with an average value of 3.8/5.

**Table 3. Descriptive statistics on the variables concerning intrinsic motivation.**

	N	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
2.1	40	3.8	4	4	0.883	2	5
3.2	40	2.9	3	4	0.982	1	4

Looking at the Pearson's correlation tests in Table 4, there was a statistically significant

positive correlation between the students' perceived levels of intrinsic motivation to study English in general (item 2.1), and grades from last year (item 5.1), ( $r = 0.448$ ,  $p > 0.05$ ). There was also a statistically significant positive correlation between the students' perceived levels of intrinsic motivation to study English in general (item 2.1) and the expected grades at the end of the semester (item 5.2), ( $r = 0.519$ ,  $p < 0.05$ ). Furthermore, thinking that studying English in general is fun (item 2.1), showed a statistically significant positive correlation with the results from the grammar test, ( $r = 0.277$ ,  $p < 0.05$ ). However, the students' reported values of thinking that it is fun to work with English grammar specifically (item 3.2), did not generate a statistically significant correlation with the result on the grammar exam, ( $r = 0.239$ ,  $p > 0.05$ ).

**Table 4. Correlation tests on intrinsic motivation.**

	5.1	5.2	Results	2.1	3.2
5.1	1				
5.2	0.512	1			
Results	0.243	0.161	1		
2.1	0.448	0.519	0.277	1	
3.2	0.150	0.252	0.239	0.420	1

### 3.3 Extrinsic motivation

The descriptive statistics presented in Table 5 show that the students overall perceived themselves to be quite extrinsically motivated to study English in general (item 2.2), with an average value of 4.275/5 on the Likert scale. Furthermore, in terms of extrinsic motivation to work with English grammar specifically (item 3.1), the average value was 3.675/5.

**Table 5. Descriptive statistics on the variables concerning extrinsic motivation.**

	N	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
2.2	40	4.275	4	4	0.751	5	2
3.1	40	3.675	4	4	0.917	1	5
5.3	40	5.49	6	6	0.858	4	6

Looking at Table 6, the Pearson's correlation tests did not indicate any statistically significant correlations between any of the students' self-reported levels of extrinsic motivation, and their grades.

**Table 6. Correlation tests on extrinsic motivation.**

	<i>5.1</i>	<i>5.3</i>	<i>Results</i>	<i>2.2</i>	<i>3.1</i>
<i>5.1</i>	1				
<i>5.3</i>	0.140	1			
<i>Results</i>	0.243	0.208	1		
<i>2.2</i>	0.137	0.244	0.179	1	
<i>3.1</i>	-0.032	0.255	0.245	0.580	1

More specifically, there were no statistically significant correlations between the students' perception of being extrinsically motivated to study English in general (item 2.2), and the grades from last year (item 5.1), ( $r = 0.137$ ,  $p > 0.05$ ), or the results on the grammar test, ( $r = 0.179$ ,  $p > 0.05$ ). In addition, the Pearson's correlation test showed no statistically significant correlation between the student's perceived levels of extrinsic motivation to study grammar specifically (item 3.1), and the results on the grammar test, ( $r = 0.245$ ,  $p > 0.05$ ). Finally, there was no statistically significant correlation between what the students perceived their levels of extrinsic motivation to be in regard of the grading scale for the grammar test (item 5.3), and the results either, ( $r = 0.208$ ,  $p > 0.05$ ).

### 3.4 Self-assessment

In terms of self-assessment, according to the questionnaire items summarized in Table 7, the students overall expected good grades on their grammar tests (item 5.4), with an average score of 5.44/6 on the Likert scale, as well as for the entire semester (item 5.2), with an average score of 5.48/6. According to Table 8, these two variables had a statistically significant correlation of, ( $r = 0.720$ ,  $p < 0.05$ ).

**Table 7. Descriptive statistics of the variables concerning self-regulation.**

	N	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
<i>5.2</i>	40	5.48	6	6	0.716	4	6
<i>5.4</i>	40	5.44	6	6	0.681	4	6

Looking at the correlation tests in Table 8, it is noticeable that the expected grades on the test (item 5.4), and the actual grades on the test, did not correlate to a statistically significant level, ( $r = 0.245$ ,  $p > 0.05$ ). Furthermore, although it is not possible to know the final grades until the end of the semester, it can be observed that the students' grades from last year (item 5.1) correlate to a statistically significant level with the estimated grades on the grammar test (item 5.4), ( $r = 0.395$ ,  $p < 0.05$ ), as well as with the grades



from last year (item 5.1), ( $r = 0.512$ ,  $p < 0.05$ ).

**Table 8. Correlation tests on self-assessment:**

	<i>5.1</i>	<i>5.2</i>	<i>5.4</i>	<i>Results</i>
5.1	1			
5.2	0.512	1		
5.4	0.395	0.720	1	
Results	0.243	0.161	0.245	1

### 3.5 Knowledge of intended learning outcomes

To begin with, according to Table 9, the students generally reported that they more or less understood the intended learning outcomes of the grammar test (item 3.4), with an average estimated value of 3.725/5 on the Likert scale. Similarly, the students mainly reported that they understood why they were working with English grammar (item 3.3), with an average value of 4.6/5. The students also reported that they generally understood what they were supposed to learn in English class (item 2.4) with an average value of 4.225/5. It should also be said that there were noteworthy differences amongst the students looking at the minimum and maximum values in Table 9.

**Table 9. Descriptive statistics of the variables concerning knowledge of intended learning outcomes.**

	N	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
2.4	40	4.225	4	5	0.8	3	5
3.3	40	4.6	5	5	0.496	4	5
3.4	40	3.725	4	4	1.198	1	5

Moving to Table 10, it is noticeable that there were no statistically significant correlations between any of the variables regarding knowledge of intended learning outcomes, and the students' grades.

**Table 10. Correlation tests on perceived level of knowledge of intended learning outcomes.**

	<i>5.1</i>	<i>Results</i>	<i>2.4</i>	<i>3.3</i>	<i>3.4</i>
5.1	1				
Results	0.243	1			
2.4	0.157	-0.067	1		
3.3	-0.041	-0.182	0.426	1	
3.4	0.168	0.156	0.173	0.285	1

More specifically, there was no statistically significant correlation between the students' reported value of the questionnaire item attempting to measure their perceived extent of

understanding the intended learning outcomes (item 3.4), and the grades on the grammar test, ( $r = 0.156$ ,  $p > 0.05$ ). In addition, there was no statistically significant correlation between the students' perceived levels of understanding the purpose of working with grammar (item 3.3), and the grades on the grammar test, ( $r = 0.182$ ,  $p > 0.05$ ). And lastly, there were no statistically significant correlations between perceived level of understanding what to learn in English class in general (item 2.4), and the grades from last year (5.1), ( $r = 0.157$ ,  $p > 0.05$ ), or the grades on the grammar test, ( $r = 0.06$ ,  $p > 0.05$ ). To summarize, although the students in general reported to perceive to know the intended learning outcomes of the grammar test and English class in general, no statistically significant correlations could be found with performance in any way.

### 3.6 Setting and achieving goals & Self-monitoring

According to Table 11, with an average value of 4/5 on the Likert scale, the students in general reported that they perceived to understand what they had to do to get the grades that they wanted on the grammar test (item 4.1). Similarly, with an average value of 4.3/5, the students generally reported that they would put effort into studying (item 4.3).

**Table 11. Descriptive statistics of the variables concerning setting and achieving goals & self-monitoring.**

	N	Mean	Median	Mode	Std. Deviation	Minimum	Maximum
4.1	40	4.025	4	4	0.862	1	5
4.2	40	4.725	5	5	0.554	3	5
4.3	40	4.3	4	4	0.648	3	5

Looking at Table 12 however, no statistically significant correlation was found between the students' perceptions of understanding what they had to do in order to get the grades that they wanted on the test (item 4.1), and the actual grades on the grammar test, ( $r = 0.109$ ,  $p > 0.05$ ). Furthermore, no statistically significant correlation could be found between effort put into studying (item 4.3), and results on the grammar test either, ( $r = 0.045$ ,  $p > 0.05$ ). Comparably, the data on self-monitoring revealed that a majority of the students believed that they could influence their grades on the grammar test by studying (item 4.2), with an average Likert scale score of 4.725/5. However, no statistically significant correlation was found between the data on item 4.2, and the grade on the grammar test either, ( $r = 0.013$ ,  $p > 0.05$ ). Taken the reported effort put into studying

(item 4.3) into account, there was no statistically significant correlation either, ( $r = 0.093$ ,  $p > 0.05$ ).

**Table 12. Correlation tests on setting and achieving goals & self-monitoring.**

	<i>Results</i>	<i>4.1</i>	<i>4.2</i>	<i>4.3</i>
Results	1			
4.1	0.109	1		
4.2	-0.068	0.230	1	
4.3	-0.045	0.078	0.093	1

In summary, the results clearly show a lack of correlation between the independent and dependent variables, and in order to account for the potential reasons and consequences of this, the following section will analyze the results of the questionnaire and correlation tests in light of previous research and the research objective.

## 4 Analysis & Discussion

### 4.3.1 Grades

The overall levels of performance in English amongst the students can be considered as generally high, with an average grade of 5.73/6 from last year, and a bit lower on the grammar exam with an average grade of 5.1/6. As such, the Pearson's correlation test indicated that there was no statistically significant correlation between the grade that the students received last year and the grades on the grammar test ( $r = 0.243$ ,  $p > 0.05$ ). The reason for this is unclear, but it could be that the students have more difficulties with grammar since it is generally perceived as a more difficult and boring aspect of English according to Estling-Vannestål (2007).

### 4.3.2 Intrinsic motivation

The students reported that they were somewhat intrinsically motivated to study English in general (item 2.1), with an average score of 3.8/5 on the Likert scale. With this in mind, the Pearson's correlation tests showed a statistically significant correlation with the score from item 2.1, and the results from last year (item 5.1), ( $r = 0.448$ ,  $p < 0.05$ ), the grammar test results ( $r = 0.277$ ,  $p < 0.05$ ), as well as the expected grade by the end of the current semester (5.2), ( $r = 0.519$ ,  $p < 0.05$ ). These results are in line with the research of Ryan & Deci (2000), Dörnyei (2014), and Ortega (2009), according to whom intrinsic motivation is a strong factor in successful second language learning. Furthermore, the results also show that the students were overall less intrinsically motivated to study grammar in particular (item 3.2), with an average score of 2.9/5 on the Likert scale, which is just lower than being indifferent. In this case, the Pearson's correlation test showed no statistically significant correlation between the students' perceived levels of intrinsic motivation to study grammar (item 3.2), and the result on the grammar test, ( $r = 0.239$ ,  $p > 0.05$ ). It is not surprising that the students claim to be less intrinsically motivated to study English grammar (item 3.2), than English in general (item 2.1), as it traditionally has been considered a less fun part of English (Estling-Vannestål, 2007).

In summarizing and interpreting the results on intrinsic motivation, this finding indicates that being generally intrinsically motivated to study English (as operationalized in item 2.1), could have had a positive influence on getting good results. However, not being

specifically intrinsically motivated to study English grammar (item 3.2), did not stop the students from getting generally good grades on the grammar test anyway. These results highlight the fact that there are so many different variables affecting language performance that it is difficult to single out the effect of intrinsic motivation specifically.

#### 4.3.3 Extrinsic motivation

According to Table 5 in section 3.3, the students reported that overall, they were somewhat extrinsically motivated to study English and English grammar. Item 2.2 (extrinsic motivation - general English), had an average score of 4.275/5 on the Likert scale, item 3.1 (extrinsic motivation - grammar) had an average score of 3.675/5, and item 5.3 (extrinsic motivation – grammar grade) had an average score as high as 5.49/6. However, as seen in the results section (3.3) and Table 6, no statistically significant correlation was found between any of the independent variables concerning extrinsic motivation, and any of the dependent variables/grades. Essentially, despite the students overall reported to be extrinsically motivated (to different degrees), and generally getting good grades on both the grammar exam, and last year (item 5.1), there were no statistically significant correlations between any of these variables.

Although it is impossible to know exactly why by only using correlation tests, there are two explanations that could possibly help to interpret this outcome. First of all, it could be that there simply were no correlations between the perceived levels of extrinsic motivation and performance, because extrinsic motivation does not affect performance to a noticeable extent. In other words, it could be that the students were extrinsically motivated to perform at certain levels, higher or lower than what they actually managed to achieve in terms of grades, and that this did not have an effect on their actual performance due to one or several of the other variables affecting language learning, as mentioned by Dörnyei (2014), Brown (2007), Schumann (2004), Zimmerman (2000), and Lightbown & Spada (2013). This would highlight the difficulties in singling out and measuring the effect of specific variables in second language learning, and stressing the need for further research within the area. Secondly, it could also be that the students had a difficult task in assessing their own levels of extrinsic motivation, due to motivation being an abstract concept that is part of emotional and hormonal responses in the brain, most of which people do not have direct access to (Celce-Murica, 2014; Simpson & Balsam, 2016). In other words, it could be that to actually get access to the students' real

levels of extrinsic motivation, this abstract construct needs to be operationalized differently. Although it is difficult to make any conclusions, these results show that there is a need for more research within the area.

#### 4.3.4 Self-assessment

The students had high expectations of themselves when self-assessing their grades, both for the entire semester (item 5.3), with an average score of 5.48/6, and the grades on the grammar exam (item 5.4), with an average score of 5.44/6. However, as seen in Table 8 in section 3.4, the students did not self-assess their grades on the grammar test (item 5.4) accurately, as there was no statistically significant correlation between the self-assessed grades on the grammar test (item 5.4), and the actual grades on the grammar test, ( $r = 0.245$ ,  $p > 0.05$ ). Although it is difficult to establish why, it might have to do with the students' grades from last year affecting their perceptions of their own abilities. This is supported by the fact that the students' expected grades on the grammar test (item 5.4), showed statistically significant correlations with the students grades from last year (item 5.1), ( $r = 0.395$ ,  $p < 0.05$ ), as well as with the self-assessed expected grades this semester (item 5.2), ( $r = 0.512$ ,  $p < 0.05$ ). An overestimation due to the grades last year could be the result of the students' perceptions of their own abilities, or their conceptual "selves", as Dörnyei puts it (2014). Furthermore, according to Wiliam (2011), not only are students usually generally good at assessing their own skills, but their self-assessed level of competence should also affect their grades. This is also the case according to so-called self-verification theory, presented by Beyer & Bowden (1997), according to which the students have a self-conception of their own abilities that should push them to achieve similar results. Although it is unclear why the results point to the contrary, it further stresses the need for more research on self-assessment.

Finally, it can also be noted that the self-assessed grades on the test (item 5.4), did yield a positive statistically significant correlation with the reported levels of effort put into studying for the test (item 4.3), ( $r = 0.363$ ,  $p < 0.05$ ). However, the reported levels of effort put into studying for the grammar test (4.3) did not correlate with the results of the grammar test, ( $r = -0.045$ ,  $p > 0.05$ ). This could indicate that the students might have adapted their levels of commitment to studying according to how they thought that they would perform, but that this led to worse results than they had expected. It could also be

that the students simply did not use (or know how to use) self-assessment as a strategy to learn more, which would go against the recommendations of the Swedish National Agency for Education (Skolverket, 2012), and Zimmerman (2000).

#### 4.3.5 Knowledge of intended learning outcomes

Looking at Table 9 in section 3.5, it seems as although the students generally perceived themselves to know what they are doing and why during English class (item 2.4), with an average score of 3.725/5. And although most of the students reported that they knew why they were working with English grammar (item 3.3) with an average score of 4.6/5, fewer students reported to know the intended learning outcomes of the grammar test (item 3.4), with an average score of 3.725/5. Despite the students generally reporting to know the different intended learning outcomes, according to Table 10 in section 3.5, none of the independent variables regarding perceived level of knowledge of intended learning outcomes (items 2.4, 3.3, and 3.4) rendered any statistically significant correlations with any of the dependent variables on performance (item 5.1 and the grammar test grades).

In interpreting these results, one must first consider that having knowledge of the intended learning outcomes might not have an effect on performance at all. On the other hand, it could also be that some students might have perceived themselves to know the intended learning outcomes, when in fact they did not, and the other way around. This would emphasize the difficulties involved in teaching students to adhere to specific intended learning outcomes, and the importance of teachers being attentive to what the students perceive to be the intended learning outcomes. Either way, the operationalizing of the variable has also had an effect on the outcome of the results, as the operationalizing of the variable in this research project focused on the students' own perception of knowing the intended learning outcomes. This once more points towards the need for further research within the field. Either way, although others such as Wiliam (2011), and Zimmerman (1990), highlight the positive effects of knowing the intended learning outcomes as a very valuable variable within second language learning, no correlation could be determined within the parameters of this research project.

#### 4.3.6 Setting and achieving goals & Self-monitoring

According to Table 11, in section 3.6, the students reported that they generally knew what

they had to do in order to get the grades that they wanted on the grammar test (item 4.1), with an average value of 4.025/5, and they also reported that they perceived themselves to be able to influence their grades by studying (item 4.2), with an average value of 4.725/5. It is also noticeable that the students generally put effort into studying for the grammar test (item 4.3), with an average value of 4.3/5. However, as seen in Table 12, in section 3.6, the Pearson's correlation tests did not show any statistically significant correlations between any of these three independent variables, and the grades on the grammar test. It can also be added that the results show that there was no statistically significant correlation between the students' beliefs that they could influence their grades by studying (item 4.2), and the reported effort put into studying (item 4.3), ( $r = 0.093$ ,  $p > 0.05$ ). Nor was there a statistically significant correlation between the students' perception of knowing what they had to do in order to get the grade that they wanted (item 4.1), and the reported effort put into studying either (item 4.3), ( $r = 0.078$ ,  $p > 0.05$ ).

According to the hypothesis, there should have been a correlation between the students' own goals and perceived levels of self-monitoring, and their grades on the grammar test, as the benefits of these strategies have been confirmed by (amongst others) the research of Wiliam (2011), Zimmerman (2000; 1990) and Hattie (2012). Therefore, it is difficult to interpret these results within the parameters of this methodology. However, it could be that the students' goals simply did not affect their efforts. Furthermore, it could also be that the students either did not know what they had to do in order to get the grades that they wanted, even if they thought that they did, or that the students did not know how to influence their grades by studying, even if they thought that they did that as well. Likewise, these results might also indicate that the students did not report their goals and efforts accurately, which could be both due to the operationalizing of the variables in the questionnaire, as well as the students' inability to directly access and assess this information in their minds. In the end, it could also be that no statistically significant correlation could be calculated between these variables because the students have not been taught how to properly use them, which is something that has to be learnt according to Dalland & Klette (2012), and Zimmerman (2000). In any case, these results stress the need for further research on the effects of self-monitoring strategies, that both operationalizes the variables differently, and evaluates how the students are taught to use these strategies.



Add a paragraph discussion the limitations of your study and how the research design could be improved for future research.

#### 4.3.7 Limitations and further research:

In conclusion, although previous research points towards the benefits of self-regulation strategies, aside from intrinsic motivation, no statistically significant correlation was found between the independent and the dependent variables. This could be because self-regulation strategies simply do not affect learning to a noticeable extent, or that the students did not use the strategies properly. However, it could also be that the operationalizing of the variables did not sufficiently succeed at tapping into the students' actual usage of these methods. As such, one of the limitations of this research project, and many others, is that it cannot explicitly explain why the results look like they do, only speculate. This is the main difficulty when trying to measure the effect of processes in the brain, and as such, the results do not diminish the value of the research in attempting to fill the research gap, it does however highlight the need for further research within the field. Further research projects could potentially attempt to measure these variables by going more into depth and using a lot of multi-item scales in questionnaires, operationalizing the same variable in several different ways.

## **5. Conclusion & Summary**

### **5.1 Conclusion**

In conclusion, the results of this essay did not confirm the benefits of the analyzed self-regulation strategies, contrary to the research by Hattie (2012), Zimmerman (2000), Sautelle et al. (2015), Wiliam (2011), and the guidelines in the steering documents published by the Swedish National Agency for Education (2012). The only variable that showed a clear positive correlation with the students' grades was the operationalized variable for intrinsic motivation, which according to Ortega (2009) and Ryan & Deci (2000) is a strong positive influence on second language learning. At the heart of these results is the acknowledgement that these strategies are based on abstract concepts and complex biological functions in the brain that need to be properly operationalized in order to measure their effect (Simpson & Balsam, 2016. Schumann, 2004). As such, this research project makes no claims to have disproven the benefits of using self-regulation strategies, or the importance of having motivated students when teaching a second language. However, as the results contradicted the hypothesis, this essay has highlighted the urgent need for further research on self-regulation strategies and motivation, focusing on different methods of operationalizing these variables, in order to fully comprehend their effect on second language learning.

### **5.2 Summary**

To summarize, this essay attempted to operationalize abstract self-regulation strategies, as well as theoretical motivational concepts, in order to examine their effects on 40 Swedish upper secondary school English learners, by calculating the correlation between their perceived level and usage of these strategies, and their grades. The following research questions were proposed:

1. To what extent does the level of extrinsic and intrinsic motivation correlate with general English performance and English grammar proficiency?
2. To what extent do the following four self-regulation strategies correlate with general English performance and English grammar proficiency, self-assessment, knowledge of intended learning outcomes, setting and achieving goals, and self-monitoring?

The answer to both was that almost no statistically significant correlation could be found

between any of these variables, with the exception of intrinsic motivation to study English in general, which had a positive correlation with both general English performance and grammar proficiency. As such, the results contradicted the hypothesis that there should have been some correlations between performance and usage of self-regulation strategies, as previous research points towards the benefits of using such strategies. Furthermore, the cause of the lack of correlations between extrinsic motivation and self-regulation strategies, and English performance and grammar proficiency was impossible to establish within the parameters of this research project. However, one can speculate that these independent variables did not have an effect on the dependent variables to begin with. Or that no specific effect could be established due to the students not using these strategies properly, due to not knowing how. Furthermore, it could also be that the operationalizing of the variables in the questionnaire, that was aimed at evaluating the perceived levels and usage of these variables by the students themselves, did not sufficiently tap into their actual usage and levels of these variables. Future research could potentially attempt to tap into these variables by going deeper into them, operationalizing the same variable in numerous different ways using multi-item scales to evaluate the students' perceived usage of these strategies from different angles. Either way, the results suggest that more research within the field is necessary.

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# Appendix A – The questionnaire.

## A Study on Motivation and Self-assessment

Dear students,

Most things you do in English class have been intentionally selected either by your teachers or by Skolverket, for you to learn something specific. Learning takes place when your brain processes new information and turns it into knowledge or proficiency. Although the learning processes are very complex, it affects everything you do. Studies indicate that the way you think about HOW and WHY you do things in English class will have an impact on how much you actually learn.

This study aims at measuring some effects of self-awareness (the way you think about how and what you are doing) and motivation on grades. I would be grateful if you would be willing to participate.

This survey will include around 50 students, and it is completely anonymous. All you have to do is take about 15 minutes to answer the following questionnaire concerning your attitudes towards what you are doing in English class, and how you think the semester is going. After your grammar test, your teacher will connect your grade to your questionnaire, rendering it anonymous to me and anyone reading the research paper.

Your participation in this survey is completely voluntary, and you can choose to withdraw at any time. There are no right or wrong answers (but please answers truthfully to the best of your ability). The results will only be used for this specific research project which is being conducted at Stockholm University, and you will be provided with a free copy of the research paper when it is finished.

If you have any questions at all, do not hesitate to ask:

Johan Henriksson

0704935308

Johanhenriksson90@gmail.com

THANK YOU!

/Johan Henriksson

## Questionnaire

Please tick the box with the description that you feel most accurately fits with the statement.  
There are no right or wrong answers, but please answer all questions truthfully, and to the best of your capacity.

### EXAMPLES:

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
2.1 I think it is fun to study English	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.1 I know what I have to do to get the grade that I want on the test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

1.1 I give my consent that the information in this survey be used for this specific research project being conducted at Stockholm University	YES	NO
	<input type="checkbox"/>	<input type="checkbox"/>

	Man	Woman	Other
1.2 I identify as a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Naturvetenskapliga programmet	Samhällsvetenskapliga programmet	Other
1.3 I am in the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Swedish	English	Other
1.4 My first language is	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Every day	Every few days	At least weekly	At least monthly	Very seldom



<b>1.5 I speak English outside of the classroom</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
<b>2.1 I think it is fun to study English</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2.2 I am motivated to learn English</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2.3 I think it is important to learn English</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2.4 I generally understand what it is that I am supposed to learn in English class</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
<b>3.1 I am motivated to work with English grammar</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3.2 I think that it is fun to work with English grammar</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3.3 I understand why I am working with English grammar</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3.4 I understand the intended learning outcomes (what I am supposed to learn) for the grammar test</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4.1 I know what I have to do to get the grade that I want on the test</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4.2 I can influence my grade on the grammar test by studying</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4.3 I put effort into studying for the grammar test</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	A	B	C	D	E
5.1 I got the following grade in English in högstadiet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.2 I expect to get the following grade in English 5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.3 My level of motivation should give me the following grade on the test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.4 I think I will get the following grade on the test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Comments (optional):**

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**THANK YOU VERY MUCH FOR YOUR PARTICIPATION!**

## **Appendix B – Additional questionnaire item for class nr. 2.**

**What are your main sources of motivation to do well on the exam next week?**

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