Searching For Success

An overview of factors relating to academic achievement

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ABSTRACT

The purpose of this three-part study is to acquire greater knowledge of success in school and the factors that affects it, in order to better understand the school-related reality that students face every day. It is made up of a document study of some of the currently leading literature on academic and other types of success and of the Swedish steering documents that regulate the Swedish school system and a questionnaire based survey on what Swedish high school students believe it takes to succeed in school. Largely, the study finds that both inner factors, like personality traits and soft skills, and outer factors like school organization and good teachers, have a massive impact on academic outcome and therefore also adult outcome. The study largely finds that there are much empirical evidence suggesting that certain things affect achievement both positively and negatively. Nothing is left up to chance.

Keywords: success, achievement, learning, skills, traits, factors in success
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1. INTRODUCTION

[Success in school] ...admits of other things than intelligence; to succeed in his studies, one must have qualities which depend on attention, will, and character; for example a certain docility, a regularity of habits, and especially continuity of effort. A child, even if intelligent, will learn little in class if he never listens, if he spends his time in playing tricks, in giggling, in playing truant.

-(Binet and Simon, 1916, p. 254)

“Everybody can succeed in school” This positive message can be read on Skolverkets web page, a governmental organ for regulating, evaluating and providing guidelines for the entire Swedish school system, in English called the Swedish National Agency for Education (SNAFE). Many studies have been made regarding what factors have an impact on whether or not a student manage to achieve academic success, and most of these studies methodically and deeply investigate different factors and weigh them against the results of the students, and thanks to studies like these we now know that parental involvement and teacher commitment are crucial for student success. There are also many a study looking into student attitudes towards school in general and certain aspects of school in particular. This study is meant to be a combination of the two, wanting to look into the attitude among Swedish high school students on academic success. The study aims to ascertain what Swedish high school students themselves, without any required regards to scientific findings or empirical evidence, experience as necessary to succeed in school.

This is done for three main reasons. Firstly to see what the students think are requirements for a successful graduation. Secondly, to find out if they feel that these necessary factors are available to them, and thereby discover if there is a correlation between what they think are the requirements and their current situation. Thirdly, the student’s answers will be held in comparison to studies such as John Hattie’s Visible learning but also to reports from the Swedish institute Skolverket, to see if the answers given by the student participating in the study correlates with earlier research findings, and the findings of Swedish governmental reports.

1.1 RESEARCH QUESTIONS AND PURPOSE OF STUDY.

The purpose of the study is to acquire greater knowledge of success in school and the factors that affects it, in order to better understand the school-related reality that students face every day. This purpose will be achieved through a three-part study. Firstly, through an overview of earlier research regarding academic success. Since reviewing earlier research is one aspect of this study’s empirics, this aspect will be referred to as document study so as to not be confused with section 1.3, which is the standard section on earlier research. Secondly a content analysis of the guidelines provided by the Swedish government regarding academic success will be carried out, and this is also a form of document study. Thirdly, a group of some 200 students from the Swedish high school system will be asked to answer the question what they think is required to succeed in school.
The study also wants to see if the students feel that they themselves “have what it takes” to succeed in school. A way of gathering information by having students fill out a questionnaire was modeled for this part of the study to ascertain what Swedish high school students experience as necessary factors for succeeding in school, and more specifically achieving a successful graduation from the Swedish school system. The study will also have the students specify which of these self-experienced factors the students feel are available to them. The premise is based on a pre-defined definition of what succeeding in school and graduating successfully means, which will be explained under Method.

The research questions at the base of this study is as follows:

- What do the documents studied say about factors relating to academic success?
- What can be found in The Curriculum For Upper Secondary School regarding academic success?
- What factors and/or criteria do Swedish high school students find necessary for succeeding in school, and which of these factors and/or criteria do the students experience are applicable to themselves?
- How and to what degree do the results of the different parts of this study relate to each other?

1.1.1 DISPOSITION OF THE ESSAY
Before venturing on, the disposition of this essay will be outlined. In this section, the purpose of the study, along with the research problem and questions has been covered. From here we go on to the method section, in which the selection of the empiric sources as well as the scientific base and methods will be explained. Before moving on to section two, an overview of previous research will be given. Section two covers the first part of the document study, which continues in parts three and four. In section five, analyzing will be carried out and various types of discussions will be held. The essay concludes with chapter six, containing summary and conclusion.

2. METHOD AND THEORY
2.1 THEORETICAL BASE AND SCIENTIFIC METHOD
Jan Hartman (2004) describes how hermeneutics can be used for explaining how people experience aspects of the world, not how the world necessarily really is. The point of a hermeneutical study can therefore be to investigate a certain groups given notions on a topic (Hartman 2004). This is the theoretical base for the survey conducted with the students. It was conducted in order to investigate their views on academic success, in a context relevant to them (i.e. what it takes to graduate from the form of school they were currently in) and through that acquire understanding of their lifeworld. To complement their points of views and acquire scientific empirics to help interpret the students’ answers, two other part-studies were designed. As will be further explored in the next section, this is in accordance with a main theme of hermeneutics (Alvesson & Sköldberg 2009). In order to understand the whole, one must understand the parts of that whole, and the parts
must be understood individually and always in relation to the whole. The other two part-studies are meant to be complementary means of understanding the students’ lifeworld.

2.1.1 HOW THE THEORY WAS USED

As explained above, hermeneutics was the theoretical base and the scientific method for this study. Alvesson & Sköldberg (2009) explains that one of the main theme of hermeneutics is that the whole consists of parts, that can only be understood if related to the whole, and the whole can only be understood by understanding the parts. This was my frame of reference when planning this study. My “whole” is finding factors that have been proven to relate, positively or negatively, to academic achievement, this is done in order to better understand the school-related reality that students face every day, and the three parts that will be studied each provide a piece of this puzzle.

I decided to investigate my research problem on three levels, corresponding to the three part-studies: on an individual level (the students), a governmental level (the curricula) and on a scientific level (John Hattie and James Heckman). Each study will, throughout this paper, be related both to the whole and to each other, all according to Alvesson & Sköldberg. Regarding how the parts of my whole are connected, their connection will be ascertained in Chapter five, where all empirics are discussed and analyzed, and throughout the paper, that connection is ensured via hermeneutical methodological principles, presented by Alvesson & Sköldberg (2009). In other words, throughout this paper I keep the different part together by continually applying the same methodological principles on them, and this culminates in Chapter five, where it is all brought together. The principles applicable to my study are:

- Coherence: the interpretation should be logically consistent
- Comprehensiveness: one should always take regard for the whole text
- Penetration: the underlying, central problematic should be laid bare
- Agreement: the interpretation should agree with what the author really says, without distortion. Applied to this study, this principle means that when studying the documents used, no opinions of my own has been added to the empirics. There is no question of me agreeing or disagreeing with the authors, since this is an exploratory one, not one that aims to generate theories of its own.
- Potential: the application of the interpretation can be further extended.

Also, in this section I will explain in closer detail how the hermeneutic theory was used and what purpose it had regarding each of the three parts. I will explain how the hermeneutic theory was applied to gathering the data compiled in this essay, the processing of this data, analyzing this data and finally presenting this data.

2.1.2 HERMENEUTICS IN PART ONE: THE DOCUMENT STUDY OF EARLIER RESEARCH

When it comes to gathering, processing and analyzing the data from this part of the study, hermeneutics played its part by providing a pattern of interpretation, as described by Alvesson & Sköldberg (2009) combined with their explanation of what a text is. We do not, they write, interpret data or facts, but texts. Facts and data is the result of the process of interpretation, they arrive
throughout the process. This is highly applicable to the first part of my three-part study. Using the research questions as points of departure, it was possible to extract facts from the documents studies here. Regarding the pattern of interpretation, Alvesson & Sköldberg (2009) write that a pattern of interpretation should make individual details of the text understandable, while at the same time growing from them. As seen in Chapter two, this is implemented over and over again while studying the documents in this paper. When looking at factors, skills and traits that appear in the studied documents to have an effect on success, I, via this method, look closer at each factor, skill or trait in this chapter, and later, when analyzing and presenting them, it becomes apparent that the interpretation grows with each fact that has been extracted from the texts studied here.

2.1.3 Hermeneutics in Part Two: The Swedish Government
Using research question number two as point of departure for this part of the study, hermeneutics was used as follows: Alvesson & Sköldberg writes about understating and pre-understanding in hermeneutics. When analyzing the Curriculum for the upper secondary school I had achieved a pre-understanding through reading the report which I bring up initially in Chapter three. This pre-understanding was essential when studying the curriculum itself. Through this pre-understanding, I was provided with an excellent base for a pattern of interpretation. I could, for instance, use the same terminology, which puts the empirics presented in that chapter in a context, and contextuality is, according to Alvesson & Sköldberg (2009) one of the methodological principles for hermeneutics.

2.1.4 Hermeneutics in Part Three: The Students
In this chapter, part three of this study, I use hermeneutics to ascertain an answer for research question three. The hermeneutic notion of text is here applied to the 224 questionnaires that the students supplied. Firstly, the purpose of this study and research question number three in particular, can be understood through the hermeneutic concept of lifeworld (Hartman 2004). In hermeneutics, a study can be conducted to find out how a particular group or other perceives their lifeworld. Alvesson & Sköldberg (2009) furthers on this, saying that from this point of departure, what really matters is to study our place in the world, or in this case, the students’ place in the world. This was important for how exactly the answers from the students were to be given. It could never be about asking them what they think it takes to succeed in school from any form of scientific or theoretic perspective, because, as Alvesson & Sköldberg writes, the really important concern is the ordinary world in which we live, before all abstractions, rationalizations and theoretical constructions. Alvesson & Sköldberg (2009) writes that within what can be called existential hermeneutics, the study of individuals in concrete situations of life is central, and using this methodology, part three of this study was designed. To sum up, I wanted to understand the lifeworld of the students, in a concrete situation, based solely on their experience, before all abstractions, rationalizations and theoretical constructions on their part. This was actually the starting point for the design of the entire study, and the other two part-studies were added as means to understand the whole, all in accordance with the hermeneutic circle.
2.2 Selection
Jan Hartman (2004) describes different principles for making one's selection in quantitative studies. For this study, the most appropriate one was selection based on convenience. Hartman (2004) explains that this method of selection is favorable for one with limited time and funds, both of which is applicable to the carrying out of this study. This is because I had no means of way of extending the time given to finish this study, not any monetary means of ensuring that I had a group of perfect participants for the study. It is also a sufficient selection in a study such as this, where full scientific justification for the results of the questionnaire is not sought. A negative aspect of this method of selection, Hartman (2004) writes, is that there is no way of ensuring that the specimen is representative of the larger population. Again, this is not a problem in this study, since this is an isolated study conducted in order to test a possible correlation, which is also why the students participating in this study is always and carefully referred to as just that: the particular students who partook in this particular study, as opposed to something more general. The answers from the students in this study are meant as a way of testing for correlation between what can be determined scientifically, in this case through document study, and the experienced reality of a certain group with relevance for the purpose, i.e. the partaking students.

As for selection of sources for the two other part-studies, one was a given: The Curriculum for the Upper Secondary School. This is the official steering document for the form of school corresponding with the answering students’. As explained above, I wanted to go at the research problem on three levels, and this document was essential for me to get the governmental aspect. Selecting the scientific sources was less straight forward. It was basically done through a process of elimination. While doing some of the initial research, long before the scientific base and methodology for the entire paper was laid out, the campus library and an endless string of different papers from the internet regarding academic success was scoured. Two names that continually popped up were Heckman and Hattie. It became evident that their research would be valuable to this essay when coming across a selection of reports written on behalf of SNAFE that contained references to both Hattie and Heckman. And thusly, they were chosen as the base of the scientific aspect of looking at the research problem.

2.2.1 Carrying Out the Study
The results of this study was ascertained in two different ways.

The way of learning the views of the students was of a quantitative nature and did not include gathering any personal information about the students other than what year of high school they were in and what gender they belong to. The purpose of having the students provide this information was to see if there was any difference in perspective depending on how long you have been in school, i.e. how far from actually graduating you are, or gender. The students participating were from all three years of the Swedish equivalent of high school, i.e. “gymnasiet”, meaning that they should be between the ages 16 to 19 at the time the study was conducted, but it shall be noted
that the actual age of the students was not asked for and was therefore not submitted. They were only asked to fill in what year they were in. Seeing as how there are possibilities of students having been both accelerated and retained in their time at school, some of them may have been as young as 15 and others as old as 20, but this is not a specifically large variation and, more importantly, it is not relevant for this study. This is because, insofar as age-variation was sought for, it was to see if the attitudes varied depending on how far from actually graduating the participants were.

The exact way that the answers from the students was gathered in was this. Three teachers currently working within the Swedish high school system were contacted. The teachers work at three different schools; one in the southernmost third of the country and two in the northern parts of the middle of Sweden. The nature of the study was explained and they all agreed be visited and make available as many of their classes as was wanted. They were all visited personally, as this appeared to be the best way to ensure that the purpose of the study was achieved, without anything being lost, so to say, in translation. Also, it was desired not to put any additional workload on the teachers involved. To enable gathering information from as many of their classes as possible, each teacher was visited on more than one occasion. It was explained to each class who I was and what I was doing there, and asked if they were willing to help this study by participating, which they all were. The pre-defined meaning of “succeeding in school” mentioned earlier, was explained to the students participating in the study as such: Succeeding in school is to achieve a final grade that you are happy with and which enables you to achieve your goals after graduation. The exact question they were asked to answer was: what do you think it takes to succeed in school? They were asked to write down five factors in no specific order, on answer sheets provided for them by me, see Appendix 3. To make their task as clear as possible, the whiteboard in each of the classrooms was used to create an example sheet together with the students. In this example, three answers were written down and two were underlined to illustrate marking the answers that one as a participant felt was available/applicable to oneself. The three examples used were always the same in all classes, and this may or may not have affected the result of this part of the study, which will be further discussed in chapter five.

As mentioned earlier, this study wanted to find if the students themselves felt that that the things they wrote down was in fact available/applicable to them. The students were asked them to mark this by circling or underlining the things they felt that they had access to. A concrete example:

- motivation
- good teachers
- help with homework
- being good at studying
- good friends

These examples are from an actual answer sheet from a student, and this much can be revealed already, quite a typical one. This student felt they had good teachers and friends but no actual motivation and no good study technique.

The exact number of participating students were 224. They each gave five answers, making the total number of answers 1120. The hope was to get an even number, as that would be a huge relief
when analyzing the results, calculating percentage and such like, but in the end it was pure chance that a nice round number of students answered. Of the participants, 94 were male and 130 were female. This means that 470 of the 1120 of the answers were from boys and 650 were from girls. What this means for the gender aspect is explained further in chapter Four.

As for the results from the two text-based parts of this study, they were acquired from a hermeneutic-based study of texts. Alvesson and Sköldberg (2009) describes how hermeneutics is used to interpret texts, as opposed to facts or data. The latter, i.e. the facts and/or data, is what emerges from the text via interpretation. Texts, they write, can be written with letters of the alphabet or in social act. With this they mean to say that a text is the object studied, its words may be written or spoken or perceived in some other way. Whatever the object studied may be, it always needs to be placed in its context (Alvesson & Sköldberg 2009) and this is applied in this study by the different texts or documents relevance for each other and for the purpose itself. The selection of the texts was based on their potential to make a contribution towards answering the research questions and serving the purpose of this study. They have all been studied according to methods found within the hermeneutic theory.

I have approached the texts via what Alvesson & Sköldberg (2009) writes about text, dialogue, and knocking at the text. The first section, regarding texts, is summarized in the above paragraph: what a text is, that it should be studied in its context etc. About dialogue, Alvesson & Sköldberg (2009) writes that when studying a text, hermeneuticians should use the procedure of asking questions to the text and listen to it, in dialogue form. Knocking at the text is a furthering on the dialogue approach to studying a text. It is important to not just sit passively and wait for the material to pose questions, but we must actively take the initiative and pose questions ourselves (Alvesson & Sköldberg 2009). This method proved to be quite useful when studying the documents in this paper, as each text could be asked the research question that concerned that particular document. This means, in short, that it was possible to search each documents for material relevant to this study. For a full list of the literature used, see the Reference section.

2.3 RESEARCH ETHICAL CONSIDERATIONS
For this study, guidelines for all ethical considerations were taken from Vetenskapsrådets (“The Science Council”) recommendations, and their four main requirements were all considered when conducting the questionnaire part of this paper. This means that the students were asked to participate, not told to do so, and they were given the opportunity to not answer. They were all over the age of 15 so no permission from their legal guardians was needed for them to answer the survey. They were also informed about the purpose of this study and it was explained to them that their answers would only be used for and in this particular essay, and afterwards destroyed. They were instructed on how to properly fill out the questionnaire. They were all assured that no personal information would be collected and that their own personal questionnaire would in no way be singled out or revealed in a way that could make it possible to determine who wrote it. They were also informed that no one else would get to see their questionnaires, other than a possible research
partner helping out with compiling the statistics, and they all agreed to these terms. For the
document study in this essay, none of these needed to be applied, however, when studying and
reviewing the documents, no documents have been falsified or altered in any way and nothing that
cannot be found in the documents in question has been portrayed as being in them.

2.4. VALIDITY AND RELIABILITY
When planning for this study, validity and reliability was of course an issue which needed to be
addressed. With the constant objective of strengthen this papers’ theoretical base in mind, I chose
to validate the study through hermeneutics. Alvesson& Sköldberg (2009) present very specific
instructions on the hermeneutic discipline of source criticism, the criteria of which can be applied
on both my sources, which I did before including them in my study, but also on my own study.
They provide a list of rules which applies to source criticism, which I used to put my sources to
the test, and these are some examples of such rules, and how I implemented them:

- **A source the authenticity of which is in doubt, has no value** – this important rule was applied
to all sources in this study. John Hattie’s book from 2009 which is one of the four
documents studied here, is one of the biggest studies ever conducted, and its value and/or
authenticity has never been questioned. Professor James Heckman, document number two
has a Nobel Prize to his name, the third document, a curriculum, is an official document
from the Swedish government and as for the students, I could do little more than to assure
that they had understood my instructions and would be honest with me when answering
the questionnaire. As for the quality and validity of the quantitative study conducted by me,
it may be considered to be adequate. The participating students were of the correct target
group, and they all filled out the questionnaire correctly (i.e. they each gave five answers,
all of which were of a relevant nature), however, this is further discussed in chapters five
and six.

- **Never accept a single source for a concrete statement of fact; this takes at least two
independent sources**- this rule was of course highly relevant for the entire design of this
essay. The purpose of the study is to acquire greater knowledge of success in school and
the factors that affects it, in order to better understand the school-related reality that
students face every day. To make any conclusions regarding this, the problem needed to
be attacked on more than one front. This is why this study is in three part, and this is what
separates this work from the usual modus operandi when dealing with this subject. An
overall objective is to be able to, at the end of this study, draw certain conclusions on what
affects success in school, and to do this, I must use several sources, each with different
perspectives. If I had not, the validity of this study would have been weak indeed.

- **Primary sources have a higher value than secondary ones**- it was bearing this precise rule
in mind that I made my selection of sources. I asked the students directly, I consulted the
governmental organ which regulates the entire Swedish school system, and I used two
researchers who are considered leading in their respective fields. As will become evident
in the next chapter, John Hattie (2009) has done a meta-meta-analysis consisting of
hundreds if not thousands of studies and meta-studies, which makes it considerably reliable. However, in one way, this may come in some contrast with this rule, but I dealt with it as such: firstly, a study like Hattie’s (2009) has never been conducted, and can therefore be considered a primary source of the particular knowledge that can be gained from reading it. Secondly, in the cases where I deemed it necessary, I looked directly at some of the studies that Hattie has meta-meta-analyzed, and therefore, some of them are included as references in this paper. I did this, not because there were reasons to doubt Hattie, but to be able to achieve a greater understanding of whatever their studies concerned, and therefore validating my own conclusions further.

- If two sources, A and B, are mutually dependent, so that B takes the information from A, then their combined value is no higher than that of A alone – this applies to my study much in the same way that rule number two on this list does, and mainly on the empirics found in chapter two. The two scientists which I study both provides reliable material on academic success, but they do so from two entirely different perspectives, which goes a long way to validate my study. They are among the leading in their respective fields, but, in the terms of this rule, A does not take its information from B, or vice versa. Only by finding two people with such different methods could I validate my study according to this rule.

3. DOCUMENT STUDY OF EARLIER RESEARCH

This is the first part of this three-part study. It is the documents written by two scientists in particular that will be studied and reviewed. The first scientist is John Hattie, and the other is James Heckman. These two were chosen because they have done extensive research in the field of success, both academic and otherwise, but they have done it from two very different perspectives. This enables the document study in this essay to be as wide as possible, and helps in interpreting the results of the other two parts of this study.

3.1 – EARLIER RESEARCH AND HOW THIS STUDY FITS IN

It is natural that almost all research done in the field of academic achievement and success choses a factor to study and looks at how it affects these things. Examples of studied factors are ethnicity, motivation, family relations and outer factors like watching television. Below is a sample of such studies.

CONDRON, TOPE, STEIDL & FREEMAN – THE BLACK/WHITE ACHIEVEMENT GAP, 1992 TO 2009

This study emphasizes something in the well-documented achievement gap between Blacks and Whites that they feel have been grossly overlooked: the fact that black and white students in America, by and large, do not attend the same schools. They find evidence suggesting that increases in black–white dissimilarity and black student isolation contribute to black/white achievement gaps, increases in black–white exposure reduce achievement gaps, and increases in exposure of black students to other minority students have no impact. The study makes an
important contribution to the current literature because it is the first study to address comprehensively the impacts of four forms of school segregation on black/white achievement gaps. It also, in the authors’ own words, underlines a point that the U.S. Supreme Court recognized in 1954 yet is too often overlooked in the current literature—that separate schools for black and white students are inherently unequal.

There are several studies on how sleep affects academic achievement, but other things as well, such as positive attitude towards life and motivation. Two examples of such studies are The Chronotype-Academic Performance Model (CAM): Daytime sleepiness and learning motivation link chronotype and school performance in adolescents by Roeser, Schlarb and Kübler (2013), and Sleep duration, positive attitude toward life, and academic achievement: The role of daytime tiredness, behavioral persistence, and school start times by Perkinson-Gloor, Lemola and Grob (2013). The first one focuses on when a person prefers to go to sleep and wake up, and the latter emphasizes how long the student actually sleeps. The overall findings of this studies, and other like it, is that when a child reaches puberty, their sleep patterns change, and this change tends to be towards both going to sleep and waking up later than before. This, especially when paired up with the fact that many individuals sleep to little, negatively effects both grades, attitude and day time sleepiness, which in turn negatively affects learning.

An excellent study was made by Borg (2013), called Does Hard Work in School Explain Performance Differences between Girls and Boys? It looks at both the ethnicity and gender aspect along with work effort put in by the students. This study drew on data from 8,002 students with a Norwegian background and 862 students with a Pakistani background, in total 8,864 students, to examine how working hard in school contributes to explaining gender differences in academic achievement between students of Norwegian and Pakistani descent in secondary schools in Oslo, Norway. Borg’s path analyses showed that reported school effort explains a significant part of the gender differences in school achievement for the Pakistani sample, but not as much of the gender variation in the ethnic Norwegian sample. She finds that working hard in school is a distinguishing trait for the Pakistani sample, especially the girls. Reasons for the differences is discussed, with particular emphasis on cultural distinctions in such areas as being native within a culture, expectations and pressure from home, social control and self-reporting.

The effects of bullying, abuse and violence is often studied, as well it should. One such study is Violence, bullying and academic achievement: A study of 15-year-old adolescents and their school environment by (Frugård Strøm, Thoresen, Wentzel-Larsen, Dyb 2013). They looked at their results both on an individual level and school level, and they found that on the individual level all combinations of violence and sexual abuse were strongly associated with lower grades, and that the same thing applied to exposure to bullying. On the school level they found that in schools with higher levels of bullying, the students performed worse academically. They also found indication that that type of school environment affect all students negatively, not only those who were themselves exposed to bullying, a most fascinating result. In the authors’ own words, this
emphasizes the need for preventive efforts that focus not only on vulnerable groups, but on all students and the school context.


The objective of this paper was to measure the effect of children’s television viewing on their performance in school. It used micro data from the Questionnaire Surveys on the Lives of Elementary School Pupils and Lower Secondary. In short, this is what they find: When the number of viewable commercial broadcast channels in the prefecture where a child lives is taken as the instrumental variable, the results give no evidence that the child’s television viewing affects either the mother’s report of the performance of her child in school or the child’s self-report of the speed of lessons in school. However, their estimation without an instrumental variable indicates a negative effect of television viewing.

This study fits into this particular part of this filed of research in the way that it looks not at any specific factor but aims at tying together and giving an overview of many factors which relates positively and negatively to academic success. This is achieved through a document study, studying some of the leading literature on the subject, a content analysis of The Curriculum For The Upper Secondary School, and through a questionnaire-based study targeting Swedish high school students. The document study is meant to be the base of the study and the results, and to be the control sample for what is found in the steering documents and the students’ answers.

3.2 JOHN HATTIE

This third of this third part study will begin with a review of John Hattie’s work Visible Learning- A synthesis of over 800 meta-analyses relating to achievement (2009). This book is one of the document that will be studied for this section, and the overview of it is comprehensive. Therefore, the document will at this point be presented as such, before deeper exploring the many results of Hattie’s work itself. For this purpose, the blurb of the book really says it all.

This unique and ground-breaking book is the result of 15 years’ research and synthesis over 800 meta-analyses relating to the influences on achievement in school-aged students. It builds a story about the power of teachers and of feedback, and constructs a model of learning and understanding. Visible learning presents research involving many millions of students and presents the largest ever collection of evidence-based research into what actually works in schools to improve learning. Areas covered include the influences of the student, home, school, curricula, teacher, and teaching strategies. A model of teaching and learning is developed based on the notion of visible teaching and visible learning. A major message within the book is that what works best for students is similar to what works best for teachers. This includes an attention to setting challenging learning intentions, being clear about what success means, and an attention to learning strategies for developing conceptual understanding about what teachers and students know and understand. Although the current evidence-based fad has turned into a debate about test scores, this book is about using evidence to build and defend a model of teaching and learning. A major contribution to the field, it is a fascinating benchmark for comparing many innovations in teaching and schools.
The foremost reason for Hattie’s work being relevant for analyzing the results of this study is that it is strictly evidence-based and can and should therefore be seen as pure fact. This meta-meta analyses has spent 15 years compiling meta-studies and arranged the results of these into easy-to-understand barometers measuring the relevance of hundreds of factors for achievement. The third part of this study must be seen as something quite opposite, researching solely what the student as an individual experience as relevant factors for academic success. My assessment is that the best and most appropriate way to interpret results of that nature is via facts that show what is actually true, which is why this is a three-part study. This is also how this study is going to be of use for me in future as a teacher, and perhaps also for others in the field: by revealing what the students experience is required for academic success and if these views in any way relates to what has proven beyond doubt to be relevant factors.

Hattie’s book is structured around six topics – an assessment of the respective contributions to achievement from the child/student, the home, the school, the curriculum, the teacher and the approaches to teaching, and so it is according to these topics that review of his work will be structured. It is of course impossible to give a complete overview of his work, and restrictions must be made. For this study three factors that had a positive effect and three that had a negative effect or no effect at all from each of the categories have been selected. The factors chosen to be presented are chosen from what I have experienced as relevant, both from my time at the university and when being out in schools teaching. These are factors that I have studied, or read about in the recent school debate or heard discussed in schools right now. In chapter x we will see if these facts correlate with what is experienced by the students that participated in the study, and at the end of this chapter, it will become apparent if SNAFE’s guidelines correlate with Hattie’s extensive work.

3.2.1 Hattie’s barometer

Below is John Hattie’s (2009) barometer, devised for measuring the influence of the factors he present, and before proceeding, this needs to be explained. The layout of it is that of a typical barometer, and the scale goes from -0.2 up to 1.2. There are four zones on the barometer which correlates to the scale and labels the factor as negative, low, medium or high. Within these zones there are some under categories. Between -0.2 and 0.0 is a reverse effect, meaning that whatever was tried had the complete opposite effect rather than what was actually desired. Between 0.0 and 0.3 is the low zone which is divided into the lowest, developmental effects and teacher effect. Everything between 0.4 and circa 0.7 is medium and above that, all the way to 1.2 is high. All influences above 0.40 are labeled to be within the zone of desired effect, and the average effect size is 0.40. Whenever a factor being referenced to as high or low, effective or ineffective, it is always taken directly from Hattie’s barometer.
3.2.2 THE STUDENT
As is explained in Hattie’s book (p.39), a student spends about 15 000 hours in school during a lifetime, and during these school years almost twice as much time at home. Also, before even staring formal schooling, a child spends about 26 000 hours in the care of parents and caregivers. Ergo, it is obvious that what the students brings to class, from day one of school and every subsequent day, is critical to the outcome of their education (Hattie 2009). And indeed, it is a constant in today’s school debate that things like diet and exercise, gender and ethnicity and attitudes towards school are discussed and held accountable for student success or lack thereof. So what of all this is actually relevant? The three positive effects and negative effects below are I chose, as previously stated, because I have read and heard much about their importance.

THE POSITIVE EFFECTS
PRIOR ACHIEVEMENT
What a child brings to the classroom each year is very much related to their achievement in previous years (Hattie 2009). Hattie presents studies that prove that right through the education system, prior school grades are the best individual predictor for academic success. In other words, previously low grades are a strong indicator for future low grades, and the relationship is the same for high grades. This gives that the earlier measures are taken to ensure success the more good these measures will do for a child’s future. In fact, Hattie presents a British study made by Feinstein in 2003, where evidence of achievement prior to entering school was surveyed (p.42). The ages focused on was 22 months, 32 months, 42 months, and 5, 10 and 26 years. This study clearly showed that the measured performance at 22 months was a good predictor of achievement at 26 years. Those who were in the bottom quartile at 22 months were significantly less likely to get any qualifications than those in the top quartile. This entire factor scored very high in indicating success.
SELF-REPORTED GRADES

Another form of prior achievement that Hattie (2009) report on is self-reported grades (p.43). He presents studies that show that students have accurate understandings of their level of achievement, in fact, students are very knowledgeable about their chances of success. This is something that, according to Hattie can be seen in two ways. One can use it to question using a high amount of tests when the students may not actually gain any knowledge from the tests, and it can also become a barrier for some students as they may only perform as well as they think they will. This factor scored highest possible as an indicator for success.

ATTITUDE

Hattie also shows that attitude towards school and school subjects score relatively high as an indicator for success. There are many dimensions to attitude towards school, such as a belief that on is good at schooling or not, and a belief that school is useful or not, it is a clear correlate of achievement (Hattie 2009). This means that if attitudes are enhanced there could and would most likely be reciprocal effects on achievement.

THE NEGATIVE OR NON-EFFECTIVE EFFECTS

On page 52 Hattie (2009) brings up the factor of diet interventions, which is something that has recently figured in the school debate, especially concerning artificial food additives. However, Hattie’s meta-meta-analysis shows that the treatment effects of reducing such additives are negligible and only just greater than what was expected to come from chance.

PERSONALITY

Hattie (2009) also presents, on page 45, the effect of the student’s personality. O’Connor and Pauonen (2007) looked into the so called “Big Five” personality factors and how they related to academic success. The “Big Five” are neuroticism, extraversion, openness to experience, agreeableness and conscientiousness. They would find that all correlations between these and academic success were very small, except for conscientiousness.

GENDER

The third factor that has proven to be without relevance is also the one of the most surprising and interesting. This is because, as Hattie (2009) writes (p.55) we are constantly immersed in debates about gender differences in achievement, but - as he has found through meta-analyzing 41 meta-analysis, containing 2 926 studies that noted 6 051 effects on 5 594 832 people – there are none. The synthesis shows that where differences can actually be found, they are minor indeed. This whole factor rates just above 0.1 on Hattie’s barometer, where effect starts at anything above 0.0 and everything below that marks a reverse effect. We can therefore easily deduce that whether you are male or female does not play a role in you level of academic success. Overall, we as educators should not see differences between male and female students as a major concern (Hattie 2009).
(Hyde 2005). Individuals vary much more within the groups than there are differences between boys and girls.

3.2.3 THE HOME
Chapter five in Hattie’s (2009) book deal with the home, which he states can be a nurturing place for the achievement of students or a place of low expectations with a lack of encouragement for learning (p.60). As above, three things that factor positively on achievement and three that negatively affects achievement have been selected. Below are the positive ones.

SOCIO-ECONOMIC FACTORS
Although it is hard to see this as something positive in and of itself, it is clear that the socioeconomic status of a family affects the outcome of education. What counts towards this status are things like parental income, education and occupation. However, as Hattie (2009) writes on page 62, it is important to keep in mind that the effects of SES are not one-dimensional notions. Hattie presents studies which show that from the very beginning of school, i.e. pre-school, there is a remarkable difference in what students bring to school, depending on their family’s SES. This factor scored between medium and high on Hattie’s barometer.

PARENTAL INVOLVEMENT
On page 68, Hattie (2009) goes into parental involvement, and shows that the effects thereof can be both negative and positive when it comes to academic success and educational aspirations. He presents for example Hong and Ho (2005) who noted that the most important influence on their children’s achievement was parent aspiration. If the parental involvement, however, took on a supervising form, regarding for example monitoring homework instead of helping with it, and monitoring leisure time, it seemed to have a negative effect on the students’ educational aspirations. This factor scored lower than the one above on Hattie’s barometer, but still in the mid/high zone.

HOME ENVIRONMENT
On page 66 Hattie (2009) presents the results of different types of home environments. The importance of home environment scores the same as socioeconomic status on the barometer, i.e. mid-high. He presents one meta-analysis in particular, by Gottfried (1984) that found that the most positively influential factors regarding home environment were maternal involvement, variety and play materials.

THE NEGATIVE OR NON-EFFECTIVE EFFECTS
TELEVISION
On page 67 Hattie (2009) presents the small but negative effects of television. He brings up a meta-analysis from 1982 that found a negative relationship between hours of viewing TV and achievement. The study also showed that some hours of watching TV had a slightly positive effect, as would leisure time.
WELFARE POLICIES

On page 63 Hattie (2009) looks into families on welfare programs. The receiving of welfare scores almost as low as is possible on Hattie’s barometer, showing a reverse effect. Hattie says that there are certainly many effects of welfare programs that are beneficial for the families but is seems that regarding achievement there are more powerful effects than the family’s welfare status.

SINGLE AND TWO-PARENT FAMILIES

On page 64 Hattie (2009) presents the relationship between achievement and number of parents in a home. He says that most households in the western countries have two parents, about 10-20% of the families are single parent and about 2-10% are other than these structures. A study from 2003 shows that single parenthood was associated with lower achievement in certain subjects. The study also noted that the more generous the welfare policies of the country in question the smaller gap in achievement.

3.2.4 THE SCHOOL

In chapter six, Hattie (2009) deals with a grand variety of aspects of the school, and how they influence student achievement. Some of these are occurrences that are not common or non-existent in Sweden, but I have selected six that I find relevant in Sweden today.

THE POSITIVE EFFECTS

ACCELERATION

I chose this factor partly because it is something that was done to me at several points in my schooling and partly because it ranks very high on Hattie’s barometer. Acceleration is the act of advancing a student either by letting them skip a grade or by advancing through the curriculum at a faster pace. On the barometer where 1.2 is the highest, this scores an impressive 0.88. The accelerated students did just as well as the bright students in the grades to which they were moved (Hattie 2009). Just as Hattie points out on page 100-101, this is one of the least used methods for gifted students, despite the fact that the negative effects of not accelerating a student is far greater than any social and interpersonal non-beneficial effect.

CLASSROOM MANAGEMENT

On page 102 Hattie (2009) describes the attributes of teachers that had the greatest influence on ensuring well-managed classrooms. These include an ability to identify and quickly act on potential behavioral problems. Teacher-student relationships are also powerful moderators of classroom management. Major factors in this includes clarity of purpose and strong guidance as well as well articulated rules and procedures that were negotiated with students. Overall, this factor scored mid-high on Hattie’s barometer.
PEER INFLUENCES

On page 104, Hattie (2009) writes about peer influences; a category that encompasses the powerful influences of friendship. To summarize this factor; friends can assist each other in providing emotional support, cognitive restructuring and rehearsal and practice. These things can lead to friends helping each other to achieve academic success. This factor also scores mid-high on Hattie’s barometer.

NEGATIVE EFFECTS

MOBILITY

On page 81 Hattie (2009) brings up mobility across schools, which is something that has recently been exposed as a common occurrence in Sweden, where it is also common that high school students switch between programs. Moving across schools has the lowest score on Hattie’s barometer of all the factors in the book. So much so, that it ranks below the actual scale of the barometer. Needless to say; this factor has a very negative effect on academic success and it is believed to be so because of adjustment issues such as problems with friendship patterns, particularly friendship to support learning.

OUT-OF-SCHOOL CURRICULUM EXPERIENCES

Quite recently in Sweden, tutoring or homework assistance became tax-deductible, because it is believed by our government to be something very helpful when it comes to succeeding in school. However, as Hattie (2009) points out on page 82, this is not the case. The results of different forms of tutoring are way out of the zone of desired effects and in fact, ranks just above the lowest measurable positive effect on Hattie’s barometer. The overall effects are negligible compared to what effective teachers can attain in regular classrooms using many other methods of instruction.

RETENTION

Retention is the practice of having students repeat a grade level in school and Hattie (2009) deals with this on page 97. He explains that this is an area in which it is difficult to find any studies with a positive effect and the areas of which this can be said are very few, indeed. Retention, Hattie writes, has a negative effect on academic achievement in almost all subjects in school but also work-study skills and grade-point average. Retention also has a negative effect on emotional adjustment, self-concept and attitude towards school. To quote Hattie: “The only question of interest relating to retention is why it persists in the face of this damning evidence” (p.98).
3.2.5 The Teacher

In this chapter, Hattie writes about the differences that teachers can make.

The Positive Effects

Teacher-Student Relationship

Hattie (2009) presents studies that show that in classes with person-centered teachers, there is more engagement; more respect of self and others; there are fewer resistant behaviors; there is greater non-directivity and there are higher achievement outcomes. Cornelius-White (2007) conducted a meta-analysis, in which it became apparent that most students who do not wish to come to school, or who dislike school do so primarily because they dislike their teacher. A positive relationship between teacher and student scores as high as 0.72 on Hattie’s barometer; well within the high zone.

Teacher Clarity

One of the main themes in Hattie’s (2009) book is that it is extremely important for the teacher to communicate to the student the intentions of the lesson and the notions of what success means for these intentions. On page 125, Hattie refers to Fendick (1990) when he defines teacher clarity as organization, explanation, examples, guided practice and assessment of student learning. When all these are in place, the score on Hattie’s barometer is well within the “high” zone at 0.75.

Teacher Expectation

Hattie (2009) writes plainly on page 121 about how we now know beyond doubt that teachers have expectations on all their students, and that we need to ask ourselves if these expectations are false, misleading or harmful, and if so, what can be done about it? Hattie presents meta-analysis that shows with clarity that expectations definitely play an important part, but that understanding why is very complex and that science cannot as of yet fully do that. There are for example clear proof that attractive students receive higher grades and more qualitative teaching and education, but there is no real satisfactory explanation for why this is. It is the same thing with race/ethnicity. There is a clear bias in favor of white and Asian students, but this becomes less apparent and meaningful the older the students get. Why? In any case, it is clear that expectations are a double edged sword, as they can both help students perform above and beyond their goals (as shown by Rosenthal & Jacobsen in the infamous Pygmalion in the Classroom, 1968) but also limit them and their possibilities. The overall score on Hattie’s barometer is 0.43.

The Negative or Non-Effective Effects

Teacher Subject Matter Knowledge

This factor was chosen because lately, it has turned up in the Swedish school debate. On page 113, Hattie (2009) presents studies that show that it is likely that subject matter knowledge influences teaching effectiveness up to some level of basic competence, but less so thereafter. Knowledge,
empathy and verbal ability all need to be present for to have a positive effect on student achievement outcome. These factors are greater than the sum of the parts and if one is missing, the effectiveness is reduced by more than a third. There are also studies indicating that teachers with a more intellectual orientation correlates to student outcomes, which suggests that an underlying general ability is more critical than teacher subject matter knowledge. Hattie cites a source that even suggested that intellectual ability may be more powerful than teacher training. On Hattie’s barometer, teacher subject matter knowledge scored a measly 0.09. Again, the scale begins at 0.0.

TEACHER EDUCATION

On page 109, Hattie (2009) lays down the truth about the so called “Dodge City” of the education world – teacher education. He describes the lack of consensus on how teachers should be educated and overall, the importance of how long a teacher student spent training on their future student’s results are 0.11, i.e. low. The importance seems to be pedagogical experience, through which candidates can acquire strategies and learn effective approaches. I bring this up in the light of the fact that training for a high school teacher in Sweden was just increased to a minimum of five years.

Seeing as how there were no other low-scoring factors in this chapter, we now move on to the effects of the curricula. This chapter in Hattie’s book (2009) is structured around several programs and various curricula that is non-existent in Sweden and which were found to be to foreign in their design to be relevant for this purpose. However, Hattie’s work does not disappoint in its larger message in that chapter. On page 159 he explains that it is less the content of the curricula that is important than the strategies teachers use to implement the curriculum so that progress upwards through the curricula content that makes the difference, which relates back to the previous section in which it was shown that teacher subject matter is not as important as overall pedagogical skills.

3.2.6 TEACHING APPROACHES

The last category in Hattie’s book is teaching approaches. This category is so big it is divided into two chapters, but they were chosen from based on relevance for this study and our domestic school system.

THE POSITIVE EFFECTS OF TEACHING APPROACHES

PROVIDING FEEDBACK

An overall message of Hattie’s (2009) is that their always needs to be clear communication between teacher and student for visible learning to happen. One of the things he keeps coming back to is feedback. He writes (p.173) that in completing his first synthesis of 134 meta-analyses in 1992, it soon became apparent that feedback was among the most powerful influences on achievement. He says that an important key to understanding what feedback really is, is to look at what feedback students give to the teacher. He says that when teachers are open to or seek feedback from students as to what they (the students) know, what they understand, where they are engaged and such like – then teaching and learning can be synchronized and powerful. He also provides a
model of all types of feedback, seeing as how it can greatly improve learning for all involved. Overall, it scores a solid 0.73 on Hattie’s barometer.

PROVIDING FORMATIVE EVALUATION

To further on the theme of feedback and evaluation, Hattie (2009) encourages teachers on page 181 to be open to formative evaluation of both their students and of their own teaching, saying that this is what makes for excellence in teaching. A graphed and evidence based model for formative evaluation showed great results in student achievement and overall this approach scored as high as 0.90 on Hattie’s barometer.

STUDY SKILLS

I once found myself in front of a classroom full of 19-year olds who were mere months away from graduating from the Swedish school system, and not a single one of them knew the first thing about note-taking or any other form of study technique. They all became scared and nervous when the realization came that if they wanted anything written down from my lectures they would have to write it themselves. Naturally I was shocked and appalled at this, and Hattie’s meta-analysis of studies relating to study skills show me I was right to be so. Scoring a firm 0.59 on Hattie’s barometer, on page 189 Hattie (2009) shows how much can be gained from within a subject also teaching students things like note-taking, self-monitoring and self-evaluation in students, especially at a young age and among those who have had difficulties in learning.

THE NEGATIVE OR NON-EFFECTIVE EFFECTS

STUDENT CONTROL OVER LEARNING

Hattie (2009, p.193) shows that in some cases letting students decide and control aspects of their learning that does not have any real relevance, can have a slight effect on motivation, but overall, giving students control over how their learning should happen and/or be structured, has incredibly low effect on their learning and achievement; 0.04. I include this because the Swedish steering documents are full of paragraphs telling us to do just that, despite there being no scientific evidence supporting this.

MENTORING

Hattie (2009, p. 186-188) shows that peer tutoring can be very effective and it is a good thing to let this happen in you classroom. Students can actually teach each other well, but what is known as mentoring, usually involving a teacher and a student, shows very little effect. It only reaches 0.15 on the barometer, and is still a very common occurrence in most schools. In fact, in all of the studies analyzed by Hattie, mentoring completely failed to have any significant effect, and it was even lower in schools than in workplaces, whether it was on-on-one, which is often the case in schools, or in small groups.
INDIVIDUALIZED INSTRUCTIONS

On Hattie’s barometer this scored an unimpressive 0.23 and I include it here because of the fiery debate in Sweden as we speak on how much time teacher are spending trying to individualize so much of the classroom experience. Hattie (2009, p.198) shows that students participating in completely individualized courses barely or not at all outperformed students taking the same course in the traditional way. However, there is no doubt that it is important to see each student as an individual and adapt certain things like instruction and pace to them to some extent. But there is nothing to suggest that this cannot be done by a skilled teacher in a normal sized class without it having to be apart from the overall classroom experience.

3.3 PROFESSOR JAMES HECKMAN

James J. Heckman the Henry Schults Distinguished Service professor of Economics at the University of Chicago, where he has served since 1973. In 2000, he shared the Sveriges Riksbank prize in Economic Sciences in Memory of Alfred Nobel with Daniel McFadden. Heckman directs the Economic Research Center in the Department of Economics and the Center for Social Program Evaluation at the Harris School for Public Policy, and is Professor of Law at the University of Chicago School of Law. In addition, he is Professor of Science and Society in University College Dublin and a Senior Research Fellow at the American Bar Foundation. His work has been devoted to the development of a scientific basis for economic policy evaluation. He has developed a body of new econometric tools that address these issues. His recent research focuses on inequality, human development and lifecycle skill formation, with special emphasis on the economics of early childhood. The parts of Heckman’s several decades of excellent research that is relevant for this study are what can be described as the economics of human potential. For this study, six studies made by Heckman et al (see References) have been read, and they all speak plainly about how things like soft skills and personality traits effects academic achievement and also overall success later in life, such as employment rate, wages and even divorce rate.

3.3.1 HECKMAN (2008) – SCHOOLS, SKILLS AND SYNAPSES

The relevance of this paper for this study is that it looks closely at and discusses the role of cognitive and non-cognitive abilities in relation to adult outcome and success and the role of family in creating these abilities. It reviews a substantial body of research that shows that earnings, employment, labor force experience, college attendance, teenage pregnancy, participation in risky activities, compliance with health protocols and participation in crime are strongly affected by cognitive and non-cognitive abilities. Non-cognitive abilities are defined as motivation, socio-emotional regulation, time preference, personality factors and the ability to work with others. Much like Hard Evidence on Soft Skills (Heckman & Kautz 2012), it discusses the problem with that public policy and therefore also schools focus on measuring IQ or “smarts”, while an emerging literature shows that, as is intuitively obvious and commonsensical, much more than smarts is required for success in life. Motivation, sociability (the ability to work with others), the ability to focus on tasks, self-regulation, self-esteem, time preference, health and mental health all matter. Much of Heckman’s work is focused on inequality and how to attack it. In this report he looks at
how gaps in abilities correlates to gaps in future outcome regarding wages and life success. He writes that although children in America goes to very different schools depending on their family background, tests scores are “remarkably parallel”. Gaps in ability emerge early and persist. Most of the gaps at age 18 that help to explain gaps in adult outcomes are present at age five. Evidence explaining why and how this happens is discussed. Evidence proving that schools do not account for this is presented, and the old discussion about “nature vs. nurture” is explained to be obsolete, by presenting extensive recent literature that suggests that gene-environment interactions are central to explaining human and animal development. However, it stresses that have deteriorated, and that this accounts for its fair share of inequality. Evidence is presented that proves that this is namely due to the gap between children being born into single-parent homes, and the gap between children of less educated mothers, compared to children of mothers with higher education. For example, a comprehensive study is presented that shows that college-educated mothers spend time reading to their children than less-educated mothers and less time watching TV with their children. They also devote more time to child rearing. It is also explained that these patterns are evident in many western countries. A strong point present in much of Heckman’s work is that enriching early environments can partially compensate for early adversity and an abundance of evidence proving this is reviewed and discussed in this report. Another main point of this paper, which is of highest relevance to my study, is that skill begets skill; motivation begets motivation. Motivation cross-fosters skill and skill cross-fosters motivation. If a child is not motivated to learn and engage early on in life, the more likely it is that when the child becomes an adult, it will fail in social and economic life. The longer society waits to intervene in the life cycle of a disadvantaged child, the more costly it is to remediate disadvantage.

3.3.2 Heckman & Kautz (2012) – Hard Evidence On Soft Skills
This paper looks at achievement tests, what they measure and what they miss. Standardized achievement tests (which in Sweden are largely represented by the so called national tests, or “nationella prov” or “kurs- or ämnesprov” and our equivalent of the SAT’s: “högskoleprovet”) may be a good indicator of grades and, to some extent, IQ, but none of them adequately capture soft skills such as personality traits, goals, motivations and preferences, all of which are of great importance for the labor market, academic success and many other domains. Heckman and Kautz explain how it is not at all widely understood what these tests actually measure, and the skills and traits they miss creates inequality in many areas of life. They present, much like Hattie (2009) that insofar as it is possible to pinpoint an indicator of success that surpasses almost all others in importance, it is conscientiousness – the tendency of a person to be organized, hard-working and responsible. This is something that cannot be measured by any achievement tests, and without this soft skill, as indicated by the quote in the beginning, no student, however smart, would get far. This point is largely illustrated in this paper by looking at an occurrence that does not quite exist in Sweden but is still relevant for this search for what affects academic success, which is directly relevant for success later in life (Hattie 2009, Heckman et al 2012, 2007 etc.). In America, high school dropouts can take something called the General Educational Development test which is a sort of equivalent of a high school diploma. Statistical analysis of the dropouts who take this test
show that they are smarter than dropouts who do not, and in fact as intelligent as high school graduates. So, Heckman and Kautz (2012) asks, if they have the cognitive ability, why do they not simply finish high school? They go on to present that this group (high school dropouts who acquire a GED certificate) have much less and lower developed soft skills than all others of similar demographics and in fact turn out to be far more likely to turn out criminal and engage in other types of high risk behavior, getting fired and even divorced later in life. Hattie and Kautz (2012) also present how early childhood measures taken to improve soft skills concerning conscientiousness had far reaching positive effects on academic success and income even if they did nothing to improve the IQ of the children participating. In conclusion, instilling in children and students a sense of responsibility and making them understand the importance of hard work is something that probably is in everyone’s interest, and is a clear indicator for success, not only academically.

3.3.3 Heckman & Carneiro – The Evidence On Credit Constraints In Post-Secondary Schooling (2002)

This paper looks at the ever-present discussion about the relationship between parental income and college enrollment. As Hattie (2009) concludes, there is a positive relationship between socio-economic status and academic success, and there is also a correlating pattern between college enrollment and family income. Heckman and Carneiro (2002) critically examines and discusses their chosen literature on the subject, in which the arguments emphasizes that credit restraint facing families in a child’s adolescent years affect the resources required to pay for a college education. It shall be noted at this point, an argument made by Heckman and Carneiro in the summary of this paper, that several countries, Sweden included, offers free college education for its citizens. The income gap in college enrollment is still evident in countries without tuition fees, a fact which strengthens Heckman’s and Carneiro’s (2002) way of interpreting the evidence at hand. They mean, and prove throughout this paper, that when interpreting the evidence of family income – college enrollment, one should emphasize more long-run factors associated with high family income. Better family resources in a child’s formative years are associated with higher quality of education and better environments that foster cognitive and non-cognitive skills. They have found that, at most, 4% of American youth are subject to short-term liquidity constraints that affect their post-secondary schooling. Most of the family income gap in enrollment is due to long-term factors that produce the abilities needed to benefit from participation in college. They mean that looking at such a thing as credit constraint is too short term. Instead, when looking at long-run family influence factors, they find that these produce both non-cognitive and cognitive abilities with vital effect on schooling. Conditioning on long-term factors eliminates most of the effect of family income in the adolescent years on college enrollment decisions for most people, except for a small fraction of young people. We reach similar conclusions for other dimensions of college participation — delay of entry, final graduation, length of time to complete school and college quality. For some of those dimensions, adjusting for long-run factors eliminates or even over-adjusts the family income gaps. Heckman and Carneiro (2002) points out, however, that the interpretation that stresses the role of family and the environment does not necessarily rule out
short-term borrowing constraints as a partial explanation for these trends in family-income – college enrollment relationship. They conclude that the observed correlation between family income and college attendance can be interpreted as arising in two different ways: from short-run credit constraints or from long-run family effects. The latter are quantitatively more important, even though they can identify a group, at most 4% of the population, who seem to be facing short-run credit constraints.

3.3.4 Heckman & Cameron – The Dynamics Of Educational Attainment For Blacks, Hispanics And Whites (1999)

Furthering on the theme of the paper above, this report looks into the substantial racial-ethnic gap between the minority and majority levels of college attendance and high school completion, and how family income and background relates to this. It is explained that disparity in levels of educational attainment between majority and minority groups have led to growing disparity in earnings between these groups. They also bring up the worrying disparity in college entry. The rise in the economic return to higher education demonstrates the importance of college education as a major determinant of economic success, and whites responded quickly to this already in the early 80’s. But it was not until the early 90’s that minority college attendance began to respond to the increased economic returns to college education. These trends are conventionally explained through disparity in family funds required to finance a college education. White families are favored in many ways; they tend to belong to the highest half of the family income ladder, they have fewer children and higher education themselves before having kids. But, no pun intended, all is not black and white when interpreting these statistics. The three major conclusion that can be drawn from this paper, which, according to the authors, uses better data and models than have been used by previous analysts to analyze the determinants of inequality in educational attainment among majority and minority youth, are these: when family background is not controlled for, family income appears to be a major determinant of college attendance. Considering the deficits in family resources that many minority families suffer from, the lower college enrollment rate among minorities compared to whites comes as no surprise. But they argue that the importance of short-term credit constraints is greatly exaggerated. It is the long-term influence of family income and family background as captured by our measure of ability, or equivalently by parental education, that best explains the ethnic and racial disparity in college entry. When equalizing these long-term factors, minority youth are more likely to complete high school and enter college than are majority youth, even after controlling for selectivity in educational attainment. Conditioning on background variables, family income has a stronger effect on who stays in high school and who graduates than it has on who attends college. Also, college tuition costs do not explain the disparity between majority and minority schooling attainment, as they explain that these trends are also visible in countries where tuition is free or very low.
3.3.5 Heckman, Pinto & Savelyev – Understanding the Mechanisms Through Which an Influential Early Childhood Program Boosted Adult Outcome (2012)

This paper, in the authors’ own words, offers new understanding on how a couple of hours per day of preschool at ages three and four with a curriculum that promotes social competency, planning and organization can significantly and beneficially affect life outcomes. In this paper, Heckman et al thoroughly analyses the results of an experiment called the Perry Preschool Program, which was carried out in the mid 60’s in the district of the Perry elementary school in Ypsilanti, Michigan. It targeted low IQ, low socioeconomic status African American children. About 16 percent of all African American children in the US had family and personal attributes similar to those of Perry participants at the time when the Perry program was conducted. They enrolled when they were three and stayed in the program for two years. The curriculum was based on the principle of active participatory learning, in which children and adults are treated as equal partners in the learning process, and children engage with objects, people, events, and ideas. Abilities to plan, execute, and evaluate tasks were fostered, as were social skills, including cooperation with others and resolution of interpersonal conflicts. Sessions lasted 2.5 hours and were held five days a week during the school year. Numerous measures were collected annually from ages 3-15 on a variety of socioeconomic outcomes for treatment and control participants. There were three additional follow-ups at ages 19, 27, and 40. Although this program did not produce long run gains in IQ, it did create persistent improvements in personality skills. The Perry program substantially improved Externalizing Behaviors (aggressive, antisocial, and rule-breaking behaviors), which, in turn, improved a number of labor market outcomes, health behaviors, and criminal activities. The Perry program also enhanced Academic Motivation. The program did not boost long-term IQ, but it did boost long-term achievement test scores. Achievement tests measure acquired knowledge, which is enhanced for children with better cognitive and personality traits. Enhanced personality skills promote learning, which, in turn, boosts achievement test scores. This finding is consistent with recent evidence that 30-40 percent of the explained variance in achievement test scores across students is due to personality traits and not IQ. The Perry preschool program reoccurs in much of Heckman’s work, and he considers that its results and the skills themselves that were produced through enrollment in this program deserve greater emphasis in public policies designed to promote skills and alleviate poverty. This is especially true when considering the Perry programs effect on criminal behavior, as Heckman et al says that is the dominant component of the programs total benefits. It is relevant for this paper because it gives further evidence of how important skills and traits are for success, and also, that the earlier in life they are acquired the better for the individual and therefore, by extension, for society.

3.3.6 Heckman – Lessons From the Technology of Skill Formation (2005)

This paper concludes my review of Heckman’s work, and it is also an excellent conclusion of much of his work on skill formation and the importance of abilities and personality traits for overall life success. He starts the paper by summing up by now well documented facts about how people
are very diverse on a large array of abilities, that these abilities account for a substantial amount of the variation found among people in terms of their socioeconomic success, and that gaps among children from various socioeconomic groups open up at early ages, and, if anything, widen as children become adults. He also says that family plays a powerful role in shaping these abilities and that the study of human skill formation is no longer handicapped by the taboo that once made it impermissible to talk about differences between people. On this point, I strongly feel that, albeit that science has shed this taboo, society in large is actually moving in quite the opposite direction, which I perceive to be really too bad. Especially since, as Heckman goes on to say, we know that these gaps in ability can be partially remedied if the remediation is attempted at early enough ages. In this paper he makes six arguments for how and why we can and should use the facts we now have on the technology of skill formation to implement programs targeting young children from disadvantaged environments, especially since Heckman means, and can also prove in many ways, that family is the fundamental source of human inequality. These six arguments are firstly, that abilities matter. A large number of empirical studies document that cognitive ability affects both the likelihood of acquiring advanced training and higher education, but also the economic returns to those activities. Secondly, abilities are multiple in nature. IQ has to be distinguished from what is measured by achievement tests, although it partly determines success on achievement tests. Thirdly, ability gaps between individuals and across socioeconomic groups open up at early ages, for both cognitive and non-cognitive skills. Parenting practices have strong effects on emotional development and motivation. Fourthly, it is possible to partially compensate for adverse family environments. Early interventions have a substantial effect on adult performance. Fifth, different types of abilities seem to be manipulable at different ages. This means that, for example, while factors affecting IQ deficits need to be addressed at very early ages for interventions to be effective, there is evidence that later interventions in the adolescent years can affect non-cognitive skills. Lastly, but definitely not least, the later the remediation, the less effective it is. Heckman, having reviewed policies aimed at combating cognitive deficits, like classroom remediation, knows these to have a poor track record. He also concludes that public job training programs and adult literacy and educational programs, like the GED, that attempt to remediate years of educational and emotional neglect among disadvantaged individuals have a low economic return, and for young males, the return is negative.

3.3.6 Concluding Analysis
In this section I mean to give a shorter concluding analysis of this part of the study by giving an answer to the research questions concerning the documents reviewed in Chapter Two. The empirics gathered in this chapter can be used to answer the research questions, which was what do the documents studied say about factors relating to academic success and how and to what degree do the results of the different parts of this study relate to each other?

We start with John Hattie. It becomes evident when studying Hattie’s book as a document, that many things, both big and small, some regarding the student directly and some factors on a much larger and organizational scale, matter for academic achievement. Some things that are mostly
taken for granted, like mentorship between a student and teacher, or that there is a clear difference between male and female students regarding achievement, Hattie shows to be of no real significance. Measures taken for the students’ own good, like retention, Hattie has proven to be such a negative impact that Hattie himself questions the continued existence of this praxis. A commonsensical conclusion to draw is that nothing concerning the education of our children should be left up to chance.

Moving on to Heckman et al, the documents studied regarding them clearly shows, which Heckman himself writes (2005) that abilities matter. One cannot achieve success in school or life leaning on smarts alone, which is illustrated in the study reviewed on page 18 of this essay, which proved that high school dropouts who acquired GED’s were just as smart as those who graduated high school, but they were far more likely to engage in high risk behavior and almost incapable of sticking to anything in their lives, be it jobs or marriages. As Heckman himself writes in that paper, they are the wise guys who can never finish anything. And their behavior can be largely explained by their lack of “soft skills”, proven by Heckman in that study. Heckman also shows that the earlier soft skills are promoted to children, the better for their adult outcome. Heckman (2002) is also able to determine that certain things, like low income or credit constraint, which is something often taken for granted to be the cause of low levels of academic attainment, is not in fact the reason behind this phenomenon (see p. 19) He proves this by noting the same tendencies towards low academic attainment for people of a low SES in countries like Sweden, where education is free, as well as in countries like America, where higher education required a tuition fee. He finds instead that it is the promoting of soft skills like contentiousness and child rearing, both much more common occurrences in high-income families that provides children of a high SES with the abilities needed for academic success, which in turn leads to a higher level of income later in life, and thus the circle remains unbroken, for they will in turn foster their children the same way they were fostered, and therefore send them down the road leading to high achievement and academic success.

There are several points of reference between these two scientists and their documents, even though their perspectives differ. For example, Hattie (2009) notes that there is a correlation between a higher socio-economic status and achievement, and Heckman’s research shows us the same correlation, and also explains why this is. Higher educated mothers spend more time reading to and rearing their children (Heckman 2008). Hattie presents a study (see p. 11 of this essay) that shows that maternal involvement, variety and play materials are among the things that produce these differences in abilities between children coming from various SES. Both Heckman and Hattie notes that these differences are visible from even the first day of school and Heckman further shows that they persist, and if anything, the gaps widen as the children grow up, and that the longer society waits to target a disadvantaged child, the less effect measures taken will have (e.g. p. 22).

Another strong point of reference between the two scientists which brings their perspectives together is what Hattie (2009) writes about study skills (see p. 16 of this essay). He has found that the earlier study skills including self-monitoring like planning, note taking and self-evaluation is
taught to a student, the better for their continued academic achievement. This correlates to Heckman et al (2012), in their study of the Perry Preschool Program (see p. 21). In that program, children from as early as age three were taught to plan, execute and evaluate tasks, among other things, and although this did not produce any long term raising of their IQ, it did boost their adult outcome and their test scores throughout their time in school. In other words, Heckman (2012) and Hattie (2009) here notes the same phenomenon and both their research notes the same results when study skills are promoted at an early age.

4. THE SWEDISH GOVERNMENT

The steering documents provided by SNAFE (Skolverket) are the second part of this study and its purpose. They provide clear directions and general guidelines for teachers and all who work in the Swedish school system, and all of these exist for the sole purpose of helping and enabling each and every student succeed in school. The steering document relevant for the Swedish version of high school, i.e. “gymnasiet”, is called the Curriculum for the upper secondary school (I would at this time like to point out that I will have no part in translating “gymnasiet” as “upper secondary school” which is what this time in school would be called in England, seeing as how the Swedish school system has much more in common with the American school system than the English, and in fact has barely anything in common with the English system, as Sweden has never been a part of the British empire).

In the spring of 2012, SNAFE held a conference with the purpose of acknowledging a field of research that has been overlooked in Sweden: the effect and importance of non-cognitive skills regarding school success. For this conference an analysis of the steering documents was made by Berit Hörnqvist on behalf of SNAFE. The purpose of the analysis was to find and highlight all the non-cognitive skills that the Swedish school system, all the way from pre-school to high school, is supposed to promote and help develop. For this study, I have applied the same method of analysis and looked for the same things in the most recent of steering documents relevant for the Swedish high school, i.e. the curriculum for the upper secondary school. This was done in order to see what factors other than subject-related knowledge that SNAFE counts as necessary to convey to Swedish students. The result of this content analysis is equated to the answers of the students participating in this study, i.e. these are the factors that the Swedish government in the form of SNAFE think are the necessary factors for successfully graduating from the Swedish school system and to further success later in life.

Based on the work of Hörnqvist the different non-cognitive skills have been divided into clusters.

4.1 CREATIVE SKILLS

This cluster contains skills and traits such as curiosity and innovation. Under the headline “Fundamental values and tasks for the school” in the curriculum I found that the school should stimulate the students creativity and entrepreneurship. In the section “overall goals and guidelines” is stated that students should develop their ability to take initiatives and that it is the schools’
responsibility that all students can use non-fiction, fiction and other forms of culture as a source of knowledge, insight and pleasure.

4.2 Empathic skills
This cluster contains skills and traits such as respect for others, tolerance and empathy. This is a set of skills that is heavily emphasized in the steering document in question. In fact, under the very first headline of the document, “fundamental values and tasks of the school”, there is an entire paragraph devoted to understanding and compassion for others. In it we find that the school should promote understanding of other people and the ability to empathize. The school should also strengthen the ability to live with and appreciate the values inherent in cultural diversity. In “overall goals and guidelines” we find that all students must learn to empathize with and understand the situation of other people, and develop a willingness to act with their best interest at heart.

4.3 Character traits
This cluster contains traits such as responsibility and organizational skills. In the section “overall goals and guidelines” it is stated that all teachers should take as their starting point that the students are able and willing to take personal responsibility for their learning, and should accordingly make sure that the students receive increasingly independent tasks to perform. It is noted in the SNAFE report called Betydelsen av icke-kognitiva förmågor (2013) that older versions of the curriculum contained more character traits such as scrupulosity, good work habits and perseverance, but that these have been completely removed from the steering documents by now. That is very interesting considering that Heckman’s work shows that these skills are highly relevant to success in school.

4.4 Social and communicative skills
This cluster contains skills and traits such as openness and the ability to work together. Most mentioning of such abilities can be found in the program specific parts, with emphasis on expressing yourself in many different ways and being flexible in a group.

4.5 Self-perception
This cluster contains skills and traits such as confidence and knowing who you are. In “overall goals and guidelines” we find that the student’s self-confidence should be strengthened, and that students should feel confident in their own abilities when working with others. In “fundamental values and tasks of the school” it states that a secure identity is needed for the understanding of others. The school should therefore make sure that students can develop an identity that encompasses both what is Swedish, Nordic, European and ultimately global.

4.6 Analysis and problem-solving
This cluster contains skills and traits such as abstract thinking and planning abilities. In “overall goals and guidelines” we find that all students shall have the ability to critically examine and assess what they see, hear and read. In “fundamental values and tasks for the school” it says that students
shall develop their ability to think critically, examine facts and relationships, and appreciate the consequences of different alternatives.

4.7 LEARNING AND LEARNING ABILITIES
This cluster contains skills and traits such as study techniques and reflection on one’s own learning. In “fundamental values and tasks of the school” it says that the school should provide a life-long desire to learn for the students, and that the students shall strengthen their foundations for life-long learning via their studies. In the same chapter we find that students with negative school experiences should gain a positive attitude towards learning. In “overall goals and guidelines” it says that the school is responsible for making sure that all students are able to use a large variety of sources for acquiring knowledge.

4.8 CONCLUDING ANALYSIS
This is largely what the content analysis of the steering documents has gathered. In conclusion, SNAFE means that a successful student and future adult citizen of the Swedish society is an empathic person with a life-long desire to learn and a global identity and confidence in him- or herself. He or she is able to think critically when faced with the great masses of information that our society provides us with, works well in a group and has a real sense of entrepreneurship. However, it is not needed of the individual that they pay attention to details or arrive on time. They don’t need to have high work moral or persevere, regardless of what contemporary research has found on these points In other words, these are the factors that SNAFE means to be important for success in school, and presumably for continued adult outcome. In the next chapter we will see if Swedish high school students agree. So, to answer the research question concerning this part of the study it can be found in the documents studied that SNAFE, and therefore the Swedish government, are for promoting skills and personality traits as well as subject knowledge in all Swedish high schools.

5. THE STUDENTS
This chapter represents the third and final part of this study. The rest of the paper is devoted to discussion of the results, including a comparison of all three parts, and a discussion of the methods used, a summary of the results, and concluding words on this paper.

In the Method section, it was explained how the below results were gathered in and how the study itself was conducted. The answers given by the participating students will now be presented, and it will be done according to how John Hattie structured his book Visible Learning (2009). The answers can all be placed in one of the categories Hattie uses: factors relating to the home, the students, the school, the teachers, the curriculum or teaching methods, even though the last two categories did not score many points, so to speak. The thesis when going in to this part of the study was that the student’s answers would differ from what was found in both the governmental guidelines and much of the earlier research. This turned out to be somewhat accurate, as the
students tended to look at things from solely their own point of view, which provides this study with yet another important perspective.

Before going into the figures of this study, it is relevant to mention that “good teachers” was mentioned on every single one of the 224 answer sheets. This might be a clear sign of the importance of the teacher and that it really is something that the students hold in high regard. It may also be the result of a mistake made be me. This will be discussed further in the next section.

Table 1 (see Tables p.1) shows the total number of answer that fit into each of the categories. Table 2 (see Tables p.1) shows the exact number of female and male answers for the in-category variations, while Figure 1 (see figures p.1) shows the number of male and female answers for each category as a whole. Figure 2 (see Figures p.1) shows how the answers were divided among male and female participants. Figure 3 (see Figures p.2) shows the percentage of males’ and females’ answers, relating to each category respectively. Figures 4-9 (see Figures p.2-4) show the in-category variation of the answers. The in-category variations are clusters made by me. The clusters are made up by similar answers. For example, from a variation of answers like quiet/calm/order/pleasant/not noisy/good mood in the class/classroom/school the cluster “calm school environment” was created. From answers such as fun weekends, time to play football/ice hockey/playing the piano/the guitar, plenty of time for friends/relaxing the cluster qualitative and quantitative leisure time was created.

The following can established from the survey, and the data presented in the tables and figures:

- The biggest category was “The student” with 565 answers of the 1120 in total
- Not many of the answers concerned the categories “Curriculum” or “Teaching Methods” which could indicate that students have little or no awareness of these aspects of school
- Figure two shows indications of some gender differences, but when controlling, in figure three, for the number of males and females respectively participating in the study, much of these are evened out.
- In average, each student underlined three of the five factors they answered.
- There was no affirmable age difference, i.e. difference in answers or frequency of answers based on what year of schooling the answering student was in.
- Figure three shows that the only two categories in which the gender difference persists after controlling for percentage of males and females participating, are “The home” and “The student”.
- The biggest in-category variation in the “Home” category was help – from parents in general and relating to homework specifically. Almost everyone answering this were female.
- In the “Student” category, the males and females agreed much on the importance of motivation and good friends. They had very different views regarding being smart, an answer given mainly by males, and good study technique, answered mainly by females. These two and the ones above were the biggest variations of the entire survey.
• There was not much gender difference in general, but where it was apparent, the gap was quite big.
• No difference in answers between the different years of schooling attendance could be ascertained.

5.1 Concluding Analysis
In this section I mean to analyze the empirics presented in this section by answering the research question concerning this part of the study. The question was what factors and/or criteria do Swedish high school students find necessary for succeeding in school, and which of these factors and/or criteria do the students experience are applicable to themselves? As to the first part of the question, the students look to factors relating to themselves first. Not the school or any form of organization, like Hattie (2009) focuses on. Not parental involvement or soft skills, like Heckman et al. Not critical thinking or confidence, like the Swedish government. Many answering males believe that being smart is one condition for a successful graduation but, as for the second part of the question, hardly any one of them felt that being smart was applicable to themselves. Many answering females believed in good study technique and help from parents, the second of which, many of them felt that they had access to. As stated above, the answering students underlined three of five factors in average. Almost all answering students were in agreement over good friends being necessary for a successful graduation, and all who gave good friends as an answer underlined it. When it comes to things that the answering students believe is required from the school, good textbooks, a calm environment and computers were the top-ranking answers. Most answering students were of the opinion that motivation was a strong indicator of success, which both Hattie (2009) and Heckman et al would agree to. There were also a number of stray answers, some regarding teaching methods and the curriculum. And of course, they were all in perfect agreement that good teachers is a key element for them to successfully graduate from high school.

6. Analysis and Discussion
6.1 Discussing the Results
The Discussion section of this paper is based on what Alvesson & Sköldberg (2009) writes about hermeneutic dialogue, which has been addressed earlier in this paper. They write that the dialogue is held not only between the researcher and the subject but also between the one intended to read the interpretations made by the researcher when studying the object in question. Alvesson & Sköldberg (2009) mean that in hermeneutics, what is most important is not that Truth is established with logical necessity and by empirical testing. What is important is to discuss the arguments and counter-arguments and to reach the most plausible result. I will first analyze, discuss and compare the SNAFE-documents to the work of Heckman et al.

The first thing that immediately stands out when analyzing the steering documents and the work of Heckman simultaneously is that the Swedish government is aware that non-cognitive skills are important and should be promoted in school, but some of the most important ones have been removed from the curriculum and steering documents. As written on page 24 in this paper, it is...
stated in the SNAFE-documents that all teachers should take as their starting point that the students are willing and able to take personal responsibility for their learning. Heckman’s work shows that this is not something that can be taken for granted, and it could be questioned, therefore, why this is supposed to be a starting point for all teaching in Sweden. A fine thought though it might be, a conclusion coming from the review of research done in this paper, is that there are great risks in assuming something like this. In several of Heckman’s studies (e.g. Schools, skills and synapses, 2008) it becomes evident beyond doubt that depending on which family a child is born into, the skill sets they have with them, even from the first day of school, will vary greatly. As Heckman writes, college-educated mothers will have spent far more time rearing their children than for example single, lower-educated mothers. Heckman also writes that gaps in ability forms early for children and they persist through life (e.g. Lessons Learned from the Technology of Skill Formation). It could therefore be quite contra-productive to, as a teacher in the later years of schooling, assume that each individual in the classes one faces have the skills and traits necessary to achieve autonomy. Heckman’s analysis of the Perry Preschool Program in Understanding the Mechanisms Through Which an Influential Early Childhood Program Boosted Adult Outcome indicates, however, that if measures were taken in preschool to promote certain skills and traits, it would perhaps eventually be the case that all students will have learned early on and kept developing the skills needed to succeed in school.

Next in this section the results of the survey along with the review of Hattie’s work will be analyzed, compared and discussed. There are several points of interest correlating between these two parts of this study. The first one discussed will be study skills. As mentioned before, (p.17) Hattie’s analysis show that much can be gained in forms of visible learning from incorporating things like note-taking and self-monitoring in subject teaching. 69 female answers named this as one of the five factors, and seven male answers. This could indicate that the importance of this should be emphasized in schools, and preferably early on (Hattie 2009). It does go without saying that studying for a test or to absorb the essence of a text or lecture will be easier if one has strategies and methods to implement. We move on to peer influences. On page 13, Hattie’s section on this is summarized, and it finds that friends can assist each other on, among other things, providing emotional support, rehearsal and practice, helping each other achieve academic success. This is also related to what is reviewed on page 14 in this essay, the negative effects of mobility between schools, since this causes issues with friendship patterns. Likewise, in the Earlier research section of this paper, a study on the horrible effects of violence and bullying on academic achievement is discussed (Frugård Strøm et al. 2013). A child exposed to bullying is often isolated and without help or someone to confide in, which only worsen the situation. In short, the importance of friends for all sorts of success should never be underestimated, and the survey shows that the participating students agree. As shown in table 2, it is one of the most common answers. As for things relating to the home and parental involvement there are also points of references between these two parts of the study. Many of the participating students, the female ones foremost, appreciates help from parents and help with homework, and on page 12 in this essay, it can be read that Hattie found that when parents had high aspirations for their children it had a high and positive influence on their
children’s academic achievement. Why this answer is not more common in the survey and why it is especially low among the males can of course be due to many things, and this study does not have the means to investigate this further.

Hattie also finds that no significant difference can be found between the genders (see p.11) and none of the students mentioned anything whatsoever about that succeeding in school was somehow dependent on your gender. Many male answers, almost three times as many as female, mentioned being smart as a factor needed to succeed in school. There could be a connection between this answer and what Hattie writes about Prior achievement, reviewed on page 10. He has found that previously low grades are a strong indicator for future low grades and the relationship is the same for high grades. This would mean that by the age of the surveyed students, academic success can more or less be predicted by them for themselves but also by and for their friends. It makes sense that it is assumed about successful people, both academically and otherwise, that they have high cognitive skills. This is why Heckman’s perspective on this topic is so important. As written by Heckman and retold in this essay on page 18, there is a problem in focusing too much on IQ and its roll in success, when an emerging literature and, frankly, common sense, says that much more than smarts in needed for life-success. As mentioned above, the Perry Preschool Program had no lasting effect on the participants IQ, but still their lives turned out better in every single aspect when compared to the control group. The causality between this outcome and the skills and traits promoted by the program, such as planning, perseverance and conscientiousness, cannot at this point be established. But when considering the emerging literature that Heckman et al cites, it still seems fairly likely that causality is the case. It can be mused that if something to this effect was emphasized to the students, and promoted/taught in schools, it would help improve everything from student’s self-confidence, attitude and ultimately academic results. I make this argument because smarts is something that can be perceived as something that you cannot do anything about, not least because of books like The Bell Curve (Hernstein & Murray 1994). But we now know that differences in cognitive ability can be compensated for, and, as Heckman and Kautz establishes in Hard Evidence on Soft Skills, high cognitive ability coupled with low social skills (and other soft skills) actually indicates among the lowest levels of life success, with high scores in everything from high risk behavior to divorce. This fact could possibly go a long way towards encouraging students who would not identify themselves as smart, as positive soft skills can be taught and acquired.

Lastly, a general discussion on the results of this essay will be held, in which the research questions will be answered. The first research question was what earlier research says about what factors affect academic success. Largely, as has been shown, much of contemporary research chooses to investigate a certain factor like bullying or sleeping habits. Hattie and Heckman have looked at success from two different perspectives. Much of Hattie’s results concern things on a non-personal and even organizational level, whereas Heckman looks at the individual from both a personal and societal perspective. It is not easy (or perhaps not possible) to pinpoint exactly if these two researchers find one single factor that they hold above all others when predicting success. But in
deeply researching their work, I found that what Hattie stresses most is the teacher, and what Heckman stresses most is skill formation and the families roll in it.

The second question was what can be found in SNAFE’s steering documents (in this case the Curriculum for the Upper Secondary School) regarding success in school, and it turns out that they strongly emphasize a number of non-cognitive skills to be conveyed to the students. The biggest category was democratic and emphatic skills. The third question was what Swedish high school students found necessary for succeeding in school. The most common answer was “good teachers” and other than that, the most common answers were things relating directly to themselves, such as motivation and good friends. The next question regarding which of the answered factors did the students’ themselves feel they had access to or that applied to them. In average, three of five things were underlined, good friends, good teachers and help with homework and help from parents were the most commonly underlined answers.

The last research question was if or how the answers given by the students correlated with the priorities of the government and the results of earlier research. Now following is an attempt to properly answer this question. There appears to be several mutual reference points between all three of the areas investigated in this report. Peer influence, or good friends, scored high with both the students and Hattie. Motivation was a common answer from the students, and according to Heckman motivation is vital, and is both the result of, and a contributing factor to, a successful skill-formation. Hattie found Good study technique to be important and so did many participating female students and not so many males ones. The female students also gave things relating to home environment importance, in accordance with Heckman’s findings. A calm school environment, and variations thereof, was mentioned by 32 students in total of the 224. This is a high-scoring factor in Hattie’s book, and an inquiring mind might wonder why this was not a more common answer among the students. Help with homework was also commonly answered, and Hattie found that tutoring is non-effective in promoting visible learning. None of the students specified what type of help with homework they meant (nor was it their task to specify anything in any particular way) and seeing as Hattie mentioned that friends can help each other rehearse and practice, so there are definitely forms of homework help that is good for everyone involved. Being smart was a more common answer than one might be happy about, as it has been proven by Heckman that while a high IQ certainly is no disadvantage, gaps in cognitive ability can easily be overcome by hard work and conscientiousness. The commonness of this answer, I find worrying. This is mainly because, it can be used as an excuse by students (and adults, for that matter) for why they are not achieving any higher levels of academic success. The reasoning behind such an excuse might be that given that it takes smarts to get high grades, and one does not perceive oneself to be smart, then there really is nothing to do to improve ones’ results. According to Heckman et al (2012) a persons’ IQ is not likely to rise after the age of 10-14, but this should not lead to such conclusions as was often the results of reading The Bell Curve, i.e. that there is nothing to do about it, some people are just born stupid and one can pretty much predict how a persons’ life will be based on their IQ. Not many of the students who answered being smart, underlined as something that applied
to them, and this may indicate that contemporary research on overcoming gaps in cognitive ability through soft skills should be brought into the classroom, and very early on in the schooling process, in the spirit of SNAFE’s message “everyone can succeed in school”.

6.2 METHOD AND DATA DISCUSSION
As mentioned earlier, all participating students gave “good teachers” as one of their answers. Almost everyone gave “motivation” as an answer, and this needs to be addressed at this point. The fact that teachers make a difference is well documented and beyond discussion, albeit it that not all teachers make much of a difference, and a teacher of poor quality makes a negative difference (Hattie 2009). However, the 100% occurrence of this answer may be due to a mistake made by me when collecting the data from the students. As explained in the Method section, instructions were given to all the participating classes by me personally. In order to make their task as clear as possible, the white board in each classroom was used to make an example questionnaire with the students. Three examples were given, and they were asked to write down five examples in total, which they all did. The three examples written and underlined on the white board were always “good teachers”, “motivation” and “good study techniques”. The first two were the most common answers given by the students. That fact alone goes a long way towards showing that the briefings given to the students and the examples used in them, affected how they subsequently answered the questionnaires. Yet, the third example, used every time along with “good teachers” and “motivation”, that is “good study techniques”, was not one of the most common answers. It was a lot less common than for example “good friends”. This indicates that although it may have been convenient for the students to use the example answers given to them, it is possible that they used the first two because they could relate to them and not the third one. If the latter possibility is true, it strongly says something about what is important to students of today. However, nothing can be assumed about the reason for this outcome, and it is not possible to find anything out for sure. I argue that the data is relevant and valid in spite of this peculiarity, especially since research shows (see chapter 2) that good teacher and motivation are in fact essential for a positive schooling outcome. The fact that many of the answers on the questionnaires were quite similar can also be an issue for interpretation. However, deeper analysis of the answers given by the students, other than statistically, was never intended for this study, and it is therefore left up to readers to further ponder this, if they so wish.

As for the literary analysis, the constant objective of this overview was to review all the sources as objectively as possible and this was achieved by simply retelling the read material. Dalevi (2008) says that all retellings are interpretations, and this is inevitably true. I argue that the literary review and document study in this paper is valid and reasons for this is, for example, that I have added nothing of my own when retelling the source material but stayed completely true to the original texts. The texts used have also been very factual with little or no room for interpretation and the facts presented in them are based on empirical evidence and mathematical calculations and the results of this I have presented just as they were presented in the sources. Also, complete
references are provided for each fact presented, making this essay completely transparent should anything come up for questioning.
7 CONCLUSION AND SUMMARY

This study aimed at giving an overview of factors, skills and traits relating to success, and finding out how this correlated with Swedish high school students’ view of success and the steering documents provided by the Swedish government for what skills and traits should be promoted in school in order to produce high quality citizens from the students. The factors, relating both positively and negatively to academic success, were gathered from the work of John Hattie and the sources he cites. The researched reviewed relating to skills and traits was that of James Heckman et al and the sources they cite. The content analysis of the steering documents consisted of finding out what skills, traits and factors they state should be promoted in school. The results were then compared with what the document study of leading literature on the subject. The students participating in the questionnaire based study were asked to answer what they personally believed it takes to succeed in school and that data was statistically analyzed in order to ascertain what they thought on the subject, what they thought was most important and if there were any differences between the genders or between the different years the students attended.

I would like to argue that this is a successful report based on its purpose and outcome. The desire behind the purpose was to gain a deeper understanding of the reality of students of today. The purpose of the entire Swedish school system is to educate and prepare each student for adult life, and this study aimed to pinpoint and overview factors that could affect the success of this. Much knowledge has been gained by studying leading research on the subject, and knowledge has also been gained regarding the governments’ and students’ view on the subject.

This study carries three or four perspectives, depending on how one sees it: the governments’ perspective, the students’, Hattie’s, which deals mainly with factors found in school and society itself, and Heckman’s, who looks at the importance of personal traits, how they are affected and by what. Everyone is in agreement on that both cognitive, non-cognitive abilities and outer factors are relevant for success. The curriculum analyzed puts most emphasis on empathic skills. Hattie stresses the school and its teachers. Heckman promotes soft skills and the students believe in good teachers, good friends and motivation.

As stated in the opening quote in this essay, success in school is dependent on many factors, and modern science is still trying to get a grip on what these are. As one proceeds with this, it is surely important to remember this that Heckman establishes: skill begets skill. Motivation begets motivation. Motivation cross-fosters skill and skill cross-fosters motivation. As Heckman determines, causality cannot at this point be established for the relationship between any of this and adult outcome, but scores and scores of results indicates that the earlier this is implemented in teaching and raising our young generations, the better for them, and ultimately for society.

Woody Allen has been quoted saying that 80% of success is showing up. Add some of the soft skills and traits researched by Heckman and some factors analyzed by Hattie, and success can most definitely be achieved by anyone. Let that be the overall message and main point of this essay.
REFERENCES


### APPENDIX 1-TABLES

#### Table 1

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Legend: ▲ Female  ▼ Male
FIGURE 3 - THE HOME

Help From Parents 38%
Help With Homework 53%
Qualitative and Quantitative Leisure Time 9%

FIGURE 4 - THE SCHOOL

Good Textbooks 34%
Computers 38%
Calm School Environment 25%
Good School Lunch 3%
FIGURE 5 - THE STUDENT

Motivation 36%
Good Study Techniques 13%
Being Smart 23%
Good Friends 28%

FIGURE 6 - THE TEACHER

Good teachers 100%
Objective Clarity 40%
Useful Subjects 60%

Much Individual Work 10%
Fun Lessons 90%
APPENDIX 3 – QUESTIONNAIRE

VAD TROR DU ATT DET BEHÖVS FÖR ATT LYCKAS I SKOLAN?
SKRIV FEM SAKER OCH STRYK UNDER/RINGA IN DE SAKER SOM DU KÄNNER ATT DU SJÄLV HAR TILLGÅNG TILL. TACK FÖR DIN MEDVERKAN!

Kön: Årskurs: