Challenges teaching Sustainable Development in higher education: A qualitative case study on how university teachers in Uppsala perceive the sustainable development concept

Emil Karlsson
Challenges teaching Sustainable Development in higher education: A qualitative case study on how university teachers in Uppsala perceive the sustainable development concept

Emil Karlsson

Supervisor: Hans Peter Hansen
Evaluator: Erica von Essen
## Contents

1 **Introduction** .................................................................................................................. 1
   1.1 The sustainable development concept ........................................................................... 1
   1.2 Problem formulation ...................................................................................................... 3
   1.3 Research aim .................................................................................................................. 4
   1.4 Research questions ........................................................................................................ 4
   1.5 Disposition ..................................................................................................................... 4

2 **Background** .................................................................................................................... 4
   2.1 Historical background of the SD concept – a literature review ...................................... 4
      2.1.1 From “Pre-Stockholm” to “Post WCED” .................................................................. 4
      2.1.2 The Limits to growth school versus the economists/technocrat optimists ................. 6
      2.1.3 Environmental economics ...................................................................................... 6
      2.1.4 Deep ecology .......................................................................................................... 7
      2.1.5 Eco-socialism ........................................................................................................... 7
      2.1.6 Eco-feminism ............................................................................................................ 8
      2.1.7 Eco-theology .......................................................................................................... 8
      2.1.8 The WCED version of sustainable development ......................................................... 8
      2.1.9 The IIED version of sustainable development .......................................................... 9
      2.1.10 The WBCSD version of sustainable development ................................................... 9
      2.1.11 Weak Sustainability versus Strong Sustainability ................................................... 9

3 **Psychological concepts and theories** ............................................................................ 11
   3.1 Cognitive Dissonance .................................................................................................... 11
   3.2 Theory of Normative Conduct ...................................................................................... 11
   3.3 Attitude and Behavior .................................................................................................. 12
   3.4 The Reasoned Action and Planned Behavior model ....................................................... 12

4 **Methods and methodology** .......................................................................................... 14
   4.1 Literature review of the SD concept .............................................................................. 14
   4.2 Delimitations .................................................................................................................. 14
   4.3 Phenomenological approach .......................................................................................... 16
   4.4 Semi-structured interviews ........................................................................................... 16
   4.5 Thematic analysis ......................................................................................................... 17
   4.6 Researcher credibility and trustworthiness ...................................................................... 18
   4.7 Ethical considerations ................................................................................................... 19

5 **Results** ......................................................................................................................... 20
   5.1 Thematic analysis ......................................................................................................... 20
      5.2 How the teachers experience and navigate the SD concept ......................................... 20
         5.2.1 Critical attitude towards SD - the consequences of its abstract and contradictory nature... 20
         5.2.2 Optimistic attitude towards SD, highlighting strengths and various approaches to achieve SD .......................................................................................................................... 21
   5.3 To teach SD, obstacles and opportunities in and outside of the classroom .................... 23
      5.3.1 Difficulties and potentials in the relation between student and teacher ....................... 23
      5.3.2 Challenges in planning and structuring meaningful, pedagogical and effective education for SD .......................................................................................................................... 23
   5.4 Critique of societal structures and the misuse of SD in society and by colleagues ............ 26
      5.4.1 Disagreements, misuse, and conflicts concerning the SD concept within universities ... 27
      5.4.2 Solutions and alternative values to combat power-games and unsustainable exploitation of SD .......................................................................................................................... 28

6 **Discussion** ..................................................................................................................... 31
   6.1 Examining the role of norms – the second branch of the RAPB model ........................... 31
   6.2 Investigating respondents’ preferences and the first branch of the RAPB model ............ 32
   6.3 Intentions and subsequent challenges when teaching SD ................................................. 33
   6.4 Exploring the third branch of the RAPB model ............................................................... 34
   6.5 Understanding the roles and influences of CD .............................................................. 35
6.6 Revisiting the second branch of the RAPB model ................................................................. 37
6.7 Summary .............................................................................................................................. 38

7 Conclusion ............................................................................................................................ 40

8 Acknowledgement .............................................................................................................. 41

9 References ........................................................................................................................... 42

Appendices .............................................................................................................................. i

Appendix 1 - Interview guide (English) ................................................................................. i
Appendix 2 - Intervjuguide (Swedish) .................................................................................. iv
Appendix 3 - Inductive thematic analysis process sample .................................................. vii
Appendix 4 - Information for the participants (English) ....................................................... xii
Appendix 5 - Information till deltagarna (Swedish) ............................................................... xiii
Challenges teaching Sustainable Development in higher education: A qualitative case study on how university teachers in Uppsala perceive the sustainable development concept.

EMIL KARLSSON

Karlsson, E., 2016: Challenges teaching Sustainable Development in higher education - A qualitative case study on how university teachers in Uppsala perceive the sustainable development concept. Master thesis in Sustainable Development at Uppsala University, No. 286, 44 pp, 30 ECTS/hp

Abstract: The utility of the sustainable development concept, its various meanings and interpretations has long been debated. Although labeled as an abstract concept by many, it still plays a fundamental role in guiding the development of societies. In this thesis, teachers teaching sustainable development at university level are highlighted. University teachers’ understanding and communication of the sustainability concept play a central role of shaping the perceptions and developing skills of future academics, directly or indirectly working with sustainable development. The aim of this study is to: examine the perception of university teachers teaching sustainable development, in order to analyze and determine how they perceive and make use of the sustainable development concept in their teaching. The study applies a phenomenological approach using semi-structured interviews and theories from psychology when exploring the perceptions of university teachers from Uppsala University and the Swedish University of Agricultural Sciences.

When reviewing the results of the inductive thematic analysis and comparing it with previous perspectives and theories, various interesting findings were made. A majority of the teachers included in this study appears to be pulled towards the Limits to growth school of thought. Some of the teachers can also be argued to be in line with what can be labeled as Eco-socialism and Deep ecology. In general, the teachers perceive sustainable development as an abstract concept or an oxymoron and find the term Sustainability more useful. However, a majority of the teachers perceive strength and potential in the interpretative nature of the concept since it opens for an inclusion of values. By using the model of Reasoned Action and Planned Behavior the study highlights several apparent challenges the teachers face when teaching sustainable development. For example, they highlight pedagogical issues connected to large and diverse groups of students with different academic backgrounds. Additional issues include a low sense of control in improving syllabuses and curriculums and teachers from the Swedish University of Agricultural Sciences reported social norms contributing to tense atmospheres. The study concludes that one main challenge is the absence of a clear message regarding the sustainable development concept throughout courses and master programs.

Keywords: Sustainable development, Perception, University teachers, Psychology, Reasoned Action and Planned Behavior model

Emil Karlsson, Department of Earth Sciences, Uppsala University, Villavägen 16, SE- 752 36 Uppsala, Sweden
Challenges teaching Sustainable Development in higher education: A qualitative case study on how university teachers in Uppsala perceive the sustainable development concept.

EMIL KARLSSON

Karlsson, E., 2016: Challenges teaching Sustainable Development in higher education - A qualitative case study on how university teachers in Uppsala perceive the sustainable development concept. Master thesis in Sustainable Development at Uppsala University, No. 286, 44 pp, 30 ECTS/hp

Popular summary: The meaning of the word “sustainable development” is difficult to grasp. Ever since the famous Brundtland definition there has been ongoing debates concerning how to implement it correctly. Today, the sustainable development concept continues to evolve and branch out in various directions as it is interpreted around the world. This is where university teachers teaching sustainable development come into the picture as they play an important role in society. Teachers’ perception of sustainable development is significant as their teaching influences students and thus future workers within the field. This study asks how teachers from Uppsala University and the Swedish University of Agricultural Sciences perceive sustainable development and what difficulties they face when teaching it. Eight teachers were interviewed and the material gathered was divided into three main themes. The teachers’ perceptions of sustainable development became clearer when compared to previous well-known interpretations. One could interpret their answers by using theories and concepts from psychology, such as Cognitive dissonance and Subjective norm. When reviewing the three main themes certain ideological preferences could be discerned among the teachers. For example, a majority of them leaned towards the Limits to growth school and connections could be made to both Deep ecology and Eco-socialism. A majority of the teachers were unanimous in perceiving sustainable development as an abstract concept. However, the interpretable nature of the concept was also perceived to hold potential in creating discussions on values and uniting people for a common cause.

The respondents highlighted numerous challenges when teaching sustainable development, both inside and outside of the classroom situation. These challenges could be understood by using the psychological model of Reasoned Action and Planned Behavior. By highlighting the participants’ preferred theoretical and conceptual frameworks, their perceived social norms and sense of control over their work, it was possible to gain deeper insight into the complexity within their profession. For example, several issues related to pedagogical planning was emphasized such as perceived social norms of reluctance towards the sustainable development concept. Additionally, several teachers expressed low sense of control in relation to improving syllabuses and curriculums. Teachers also underlined the time-consuming task of adapting their communication to a level of difficulty which all students from different academic backgrounds can follow. It is concluded that one main challenge of teaching sustainable development is ensuring a clear rationale between courses and programs.

Keywords: Sustainable development, Perception, University teachers, Psychology, Reasoned Action and Planned Behavior model

Emil Karlsson, Department of Earth Sciences, Uppsala University, Villavägen 16, SE- 752 36 Uppsala, Sweden
List of Tables and Figures

Fig. 1: Model of Weak Sustainability and Strong Sustainability. Own depiction based on (Robertson, 2012, p. I-2) ................................................................. 10
Fig. 2: Model of Reasoned Action and Planned Behavior. Own depiction based on (Ajzen & Fishbein 2005, p.194) ................................................................. 13
Table 1: Information about participants. Own depiction ........................................ 15

List of Abbreviations

CD: Cognitive Dissonance
CED: Conference on Environment and Development
CSR: Corporate Social Responsibility
GDP: Gross Domestic Product
GNP: Gross National Product
IIED: International Institute of Environment and Development
IUCN: International Union for the Conservation of Nature
NGO: Non-Governmental Organization
RAPB: Reasoned Action and Planned Behavior
SD: Sustainable Development
SLU: Swedish University of Agricultural Sciences
SS: Strong Sustainability
UN: United Nations
UNCED: UN Conference on Environment and Development
UU: Uppsala University
WBCSD: World Business Council for Sustainable Development
WCED: World Commission on Environment and Development
WCS: World Conservation Strategy
WS: Weak Sustainability
WWF: World Wildlife Fund for Nature
1 Introduction

1.1 The sustainable development concept

The concept of sustainable development (SD) has been an overarching goal since the famous Brundtland definition was first introduced by the World Commission on Environment and Development (WCED) in the document “Our Common Future” (WCED, 1987). It reads as follows: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 8). The SD concept is used and interpreted in various ways to accomplish change on global, national, and local levels. Dobson (1996) pointed out that there are more than 300 definitions of the concept and that this number is rising. Thus, many branches of interpretation concerning SD exist in the academic world and its different implementations by companies and societies are vast.

There is and has long been an ongoing debate regarding the utility of the SD concept. To exemplify, it is highlighted that: “Sustainable development is a "metafix" that will unite everybody from the profit-minded industrialist and risk-minimizing subsistence farmer to the equity-seeking social worker, the pollution-concerned or wildlife-loving First Worlder, the growth maximizing policy maker, the goal-orientated bureaucrat, and therefore, the vote-counting politician” (Lélé, 1991, p. 613). Moreover, Dobson (1996) explains that trying to frame SD in definition form might be a lesser strategy compared to continually evolving the concept through discourses. Sachs (2000) goes even one step further and points out that the construction of the term itself is problematic. It is explained how the inherent meaning of the word Sustainability is drastically changed when linking it to the word development. Sachs (2000) also argues that focus is shifted from the conservation of nature, renewable resources etc. to the conservation of development. Thereby, it may be considered as a concept that holds no hope for the future as it prioritizes economic growth. Additionally, it is elaborated how the concept allows for flexible use since what is supposed to be sustained and/or developed is far from clear. Luke (1995) exemplifies this ambiguity by stating that many aspects of life could be subject for SD. It could be anything from gross national product (GNP), personal income, individual consumption, material husbandry, social complexity to ecological biodiversity.

There are many who contest the concept of SD but on the other hand there are several others who perceive it to be a global agenda for change, which it originally was set out to be by the World Commission on Environment and Development. Connelly (2007) explain that there seems to be a typical governmental approach to the concept where it is presented as straightforward and unproblematic. This is explained as an example were the apparent complexities of the concept is ignored, a stance which can be put in relation to the more sophisticated position of many scientific authors. Connelly (2007) elaborates further and describes that some authors first acknowledge the ambiguity of the concept and then moves on by selecting a preferred interpretation, an interpretation which can be given legitimacy by highlighting the logical connections to the founding principles of the Brundtland report. Elliott (1999) could arguably be said to be one author who values the continuing debate on how to interpret and operationalize the concept. She underlines the importance of a continuous discussion, an iterative process where one constantly question what type of development the environmental resources could reasonably sustain. In other words, it might be beneficial not to see the SD concept as definitive but rather under constant evolution. This flexibility is highlighted as both a great strength and weakness. The concept may gain usefulness through its adaptability but lose credibility with its lack of directness.
The challenges of implementing and achieving SD in present time are abundant and complex. Gardiner (2013) describes some of these challenges in his book “A perfect moral storm” and highlights the asymmetry of power between rich and poor as well as between the current and future generations. It is explained that the richer nations with more influence and power tend to act out of self-interest even though they are mainly to blame for the increasing climate change. In contrast, the poorer nations have little to no influence but must still suffer the most from the changes caused by climate change. Furthermore, Gardiner (2013) clarifies that the current generation cannot physically bargain with future generations and that voting for politicians through democracy merely makes sure that the short-term needs of current generations are put on center stage. Moreover, it is highlighted that these challenges are often framed as scientific and economic issues when the overarching challenge could be said to be of ethical nature. Here, the lack of robust ethical theories is underlined as better tools to confront moral corruption are needed. The task of achieving SD combined with the uncertain nature of climate change seems too complex to tackle with current political and moral theories (Gardiner, 2013). In other words, the path to address the long-term global problems using the SD concept might indeed be one of mankind’s greatest trials.

There are undoubtedly many concerns and issues related to the operationalization and implementation of the SD concept, although this does not translate into there being little mentioning of the concept globally. Elling (2008) explains that today, one has to perform a thorough search to find any international or national plans where SD is not an implicit goal. This may be put into context by looking into the regulations of Swedish education. The Swedish University Law §5 states that all universities and platforms for higher education are obliged to promote SD meaning that current and future generations are ensured a healthy and good environment, social and economic welfare and justice (Svensk Högskolelag, 1992:1434). Furthermore, during a United Nations (UN) conference in Rio 2012, a declaration centering on SD was agreed upon (Sterling & Maxey, 2013). According to the declaration the following actions shall be supported by the leaders within the education sector: education for SD should permeate all disciplines, research related to SD should be stimulated, campuses shall aspire to be green as well as promoting SD through local projects whilst exchanging experience and knowledge with the help of international networks and co-operation (Sterling & Maxey, 2013). Thereby, a continuous process to permeate SD into societal planning can be said to exist.

When thinking about SD it is also important to acknowledge that the concept itself exists and continues to evolve within the era of modernity. According to Hansen et al. (2016) there are challenges bound to this notion as the historical era of current western society comes with many rationalities and epistemological perspectives. In other words, modernity can be seen as a setting for the concept of SD. Hansen et al. (2016) describes the historical change into modernity as a period where truth, previously defined by God or emperors, instead started to be defined by people. This change was made possible through people believing themselves to be rational beings with the capability to control their own fate and surroundings. Furthermore, western societies moved towards democratization, individualization but also institutionalization and secularization. In addition, the transformation into modernity also involved a shift in focus towards industrialization, technology, science and capitalism. Through this radical shift in mind-set and culture the “truth” regarding how to properly manage and control nature changed (Hansen et al., 2016). One can arguably highlight the importance of modernity as it sets the standard for our everyday way of thinking. It is a setting in which we are raised and educated which not only affects and limits our perception, but also impacts how the concept of SD is allowed to evolve or be interpreted. In addition,
Clausen, Hansen & Tind (2010) describes that the SD concept is currently floating away from public discussions, unfortunately distancing the public further from the issue. Public planners and politicians are described to struggle with promoting public participation on the subject. Additionally, there exists a widespread recognition by the public that modern society and politicians cannot seem to properly tackle the challenges of SD. Furthermore, it is explained how this unique worldwide goal, like no other, is mostly discussed in universities and used by politicians. Finally, the need for public arenas to discuss the concept and how to achieve it is highlighted. It is here one could argue, in line with Clausen, Hansen & Tind (2010), that in order to facilitate more widespread and constructive discussion on this subject, all members of society, not only certain experts and powerholders, need insight concerning SD and how it is currently being perceived and discussed.

What then could possibly add to the understanding of how SD is perceived and operationalized today? Fishbein & Ajzen (1975) suggests that attitudes and perceptions towards, for example, a concept can be seen as the proximate cause of behavior related to that concept. Hence, one may reason on the meaningfulness of delving further into how the SD concept is used, understood and communicated within the education system. As the educators of future workers within this field, university teachers arguably play a key role as their perception of the concept will influence how it will be used and perceived by future generations. In other words, the students who graduate and move into important societal roles will have been exposed to, and taught about, a selection of the over 300 interpretations of the SD concept mentioned by Dobson (1996). Moreover, by once again underlining the connection between attitude and behavior explained by Fishbein & Ajzen (1975), one can propose that university teachers’ perception of the SD concept has importance for how it is taught, communicated and researched. Additionally, Cialdini et al. (1991) points out the importance of norms within social psychology and explains that the way we perceive others affects our own behavior. By putting emphasis on both the psychology of the individual teacher and the perceived norms of their colleagues teaching about SD, it might be possible to gain deeper insight into the context of universities in which the SD concept is operationalized.

To summarize, in today’s society of modernity one can observe a tendency of alienation of the SD concept from the public. Politicians and public planners struggle to involve and create communication platforms focusing on SD, as the concept is mainly discussed in universities. This obstructs the capability to reshape, evolve and interpret the concept through continuous discussion in a more democratic manner which Elliott (1999) advocates. This is where the need for better public arenas for discussion becomes apparent. In order to provide a connection which could bridge this gap, one course of action could be to investigate and furthermore introduce members of society to the thinking of university teachers teaching about SD.

1.2 Problem formulation
Our ability to tackle future issues will depend on what interpretation of the SD concept we choose to derive from. University teachers play a key role as their education influences how the SD concept will be used and perceived by future generations. The way teachers choose to interpret SD could thus be considered central as it influences what is taught at universities. By examining teachers’ perception of the SD concept, it might be possible to highlight challenges in integrating the concept into their teaching with the help of psychological concepts and theories. This would in turn have the potential to provide more detailed knowledge of how the SD concept is used and put into practice by a specific group of teachers.
1.3 Research aim
- To examine the perception of university teachers teaching about SD, in order to analyze and determine how they perceive and make use of the SD concept in their teaching.

1.4 Research questions
- How do university teachers understand and perceive the sustainable development concept and how can their relation to the concept be described?
- In what way is the sustainable development concept internalized into their teaching and what are the challenges and opportunities the teachers face in this process?

1.5 Disposition
The following chapter, “Background”, will include a literature review covering various milestones throughout the history of SD. The literature review is characterized by serving several purposes. It both introduces the reader to the SD concept and provides context to the study. Additionally, it is important to note that the literature review also acts as a foundation and preparation for understanding the teachers’ perception of SD, articulated in the latter chapters “Results” and “Discussion”. The chapter “Background” is subsequently followed by “Psychological concepts and theories” which provides theoretical and conceptual framework for the study. In continuation, chapter “Methods and methodology” presents and describes the data collection methods and provides reasoning concerning the methodological approach of the study. For example, semi-structured interviews, thematic analysis and phenomenology are elaborated upon. Ethical considerations and limitations for the study are also discussed. The following chapter “Results” describes e.g. the teachers’ perceptions and experiences of SD through three main themes. Challenges and opportunities related to teaching SD are also highlighted. Finally, the “Discussion” chapter interprets and combines theory, findings from the literature review and thematic analysis in order to answer the research questions.

2 Background

2.1 Historical background of the SD concept – a literature review
This chapter will provide an historical background of the SD concept where well-known interpretations will be covered in order to provide a foundation for understanding some of the existing perspectives of the concept. Thereby, several overarching milestones of the SD concept from its inception to current times will be described. However, since reviewing all interpretations of the SD concept is not the main focus of this study, choices were made to narrow down the selection of interpretations, discourses, philosophies and schools of thought regarding the concept. To clarify, the selection of perspectives presented here does not represent all chronological stages of evolution of the SD concept. Thus, in the following sections the reader will be familiarized with the SD concept in order to receive context for the study.

2.1.1 From “Pre-Stockholm” to “Post WCED”
Mebratu (1998) elaborates on the historical background of the SD concept and presents three categories: “Pre-Stockholm”, which focuses on the period leading up to the Conference on Environment and Development (CED) in 1972. “From Stockholm to WCED”, which covers the period 1972-1987, between the CED and the famous Brundtland definition of SD
introduced in "Our Common Future" by the World Commission on Environment and Development. And finally the “Post-WCED” period which stretches from 1987 and onwards. Mebratu (1998) explains that it is possible to trace the SD concept as far back as the mid-1960s as some experts have argued that the concept of Appropriate technology could be regarded as a precursor to SD. The concept of Appropriate technology is defined as "[t]echnology that takes heed of the skill, levels of population, availability of natural resources and pressing social needs (defined by the people themselves)" (Mebratu, 1998, p. 500). Moreover, the period leading up the CED is summarized as a time where religious beliefs and traditions were a prominent provider of wisdom concerning how man could live in harmony with nature and society (Mebratu, 1998).

DuBose et al. (1995) highlights the importance of the CED in Stockholm 1972 and describes it as the time when significance of environmental management was realized as well as the use of environmental assessment as a tool for managing it. Furthermore, there were many indications during this event pointing at the need for an alternate form of economic development. However, the link between development issues and the environment did not emerge strongly. Continuing on, Mebratu (1998) explains that after the UN Conference on the Human Environment (UNCED) in 1972, the insight solidified that development and environment could not continue to remain in a state of conflict. Thus, in the coming years in the period “From Stockholm to WCED” various terminologies and precursors to the SD concept evolved. Examples of these terminologies are “development without destruction”, “environment and development”, “environmentally sound development” and “eco-development”. However, the major breakthrough was, according to Trzyna (1995), when the World Conservation Strategy (WCS) was formulated through the co-operation between the International Union for the Conservation of Nature (IUCN) and World Wildlife Fund for Nature (WWF). It was through this strategy, presented in 1980, that a major step was made towards integrating developmental and environmental issues and turning it into an overarching concern of conservation. Even though SD did not make a direct appearance in the text, the strategy subheading was titled “Living Resource Conservation for Sustainable Development” (Trzyna, 1995).

Moving forward eight years in time brings us back to the famous Brundtland definition presented by WCED. Mebratu (1998) clarifies that the key statement of SD in “Our Common Future” can be said to mark the concept’s political maturity. As previously mentioned SD is described as “[d]evelopment that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987, p. 8). According to Mebratu (1998) one can discern two key concepts from this definition. First and foremost, the concept of “needs” which puts emphasis on the essential needs of the poor in the world and that priority should be given to meet these needs. Secondly, there is an idea of limitations which is imposed by the structure of social organization, the state of technology and the ability of both regarding their ability to utilize the environment to meet the needs of future and present generations. Together, these aspects underline a strong link between environmental improvement, social equitability and poverty alleviation through sustainable economic growth. Mebratu (1998) continues by explaining one key event in the “Post WCED” period. In June 1992 UNCED is held which has also become known as the Earth Summit or the Rio Conference. The UNCED had all UN member countries produce a national report which covered their current developmental and environmental aspects. Additionally, each national report contained an action plan for how to promote SD. This historical event led to the production of famous international documents such as Agenda 21 and the Rio Declaration along with conventions concerning biodiversity, desertification and climate
change. Through these international documents, and the preparatory process of creating the reports for the UNCED, the concept of SD and planning for its implementation were spread around the world. Mebratu (1998) explains that along this new wave questions arose, for example: How do we go beyond the generalities and put this into practice? What is really meant by SD for all the different communities? Is there any way we can know if we are moving towards SD and a sustainable world? Dobson (1996), among many authors, underlines the benefits and the apparent disadvantages regarding the flexibility of the SD concept, as the *Brundtland definition* may be interpreted in numerous ways. Daly (1997) for example points out that there is a political consensus emerging where the SD concept is desirable and that it is institutionalized in various levels of societies already. However, Daly (1997) clarifies that the concept is dangerously vague in relation to the role of a guiding principle for advocating desired changes. Furthermore, Tryzna (1995) describes a frustration concerning the concept and that another emerging school of thought brands SD as an oxymoron - that the words “sustainable” and “development” can be seen as contradictory to each other. This is exemplified by pointing at the word “development” as implicitly meaning economic growth in a western world perspective and then posing the question if one can sustain an economic growth forever. This is pointed out as paradoxical since it could never be possible on a planet with finite resources.

2.1.2 The Limits to growth school versus the economists/technocrat optimists

As there are vast amounts of interpretations of the SD concept, one can according to Mebratu (1998), start with recognizing the two extreme and polarized schools of thought in the environmental debate. One the one side, there is the *Limits to growth school* which tends to dramatize environmental concerns to the point where projections consist mainly of severe collapse and conflict. While on the other hand, there are the economists and technocrat optimists whose line of thought usually consists of arguments claiming that resource constraints may be combated at relatively low cost by implementing the appropriate market-based policy. Mebratu (1998) continues by pointing out that there is an abundance of nuances and spectrums of interpretations within and in between these opposing schools. Thus, in order to provide structure one can divide the various interpretations and perspectives into groups based upon the core issues they seek to address. According to Mebratu (1998) these core issues derive from different aspirations and needs of individuals and groups of people which can be categorized into three major groups. These three groups presenting their definitions and interpretations of SD can in turn be divided into the *Academic Version*, the *Ideological Version* and the *Institutional Version*. These groups hold within them different ideologies, institutions and academic disciplines each with their own interests. Therefore, in order to offer a sound foundation for the coming chapters of this thesis, the three groups will be covered in the following paragraphs.

2.1.3 Environmental economics

While investigating the *Academic Version* of SD, Mebratu (1998) highlights the academic disciplines of *Environmental economics*, *Deep ecology* and *Social ecology*. In other words, it is certain scientific communities within sociology, ecology and economy that provide their perspectives of what the core of the environmental crisis is. Thereby proposing different solutions or advocating certain approaches in order to achieve SD. As a note, *Social ecology* is used interchangeably with *Eco-socialism* which is part of the *Ideological Version* and thus it is covered in an upcoming paragraph. Jacobs (1994) describes that *Environmental economics*, which is inspired by *Neo-classical economics* thinking, aims at turning the environment and any non-monetary resource into a commodity. By doing so, environmental economists intend to protect the environment by giving it an appropriate monetary value to
avoid it being exploited for free and without major consequences. Jacobs (1994) clarifies that in practice it would mean putting a price on all environmental assets including ecosystem services in order to construct demand and supply curves. It then becomes possible to find the optimal level of environmental protection through various evaluation techniques. Finally, the commodities are introduced to the market where they receive real-life prices. This is realized through subsidies for environmental improvement, taxation of environmental damage or by forming markets where environmental goods can be traded between consumers or firms by issuing permits.

2.1.4 Deep ecology
Moving onwards, Naess & Rothenberg (1990) explain that the Deep ecology movement approaches and perceives the origin of the environmental crisis to be something entirely different. Arne Naess, the Norwegian philosopher who formulated the concept of Deep ecology, highlights that environmental reforms of the current economic and social systems will not be enough in a long-term perspective. Furthermore, western culture is particularly pointed out as a root of the environmental crisis because of its cultural values that legitimize the domination of nature. In other words, western culture is portrayed as largely inappropriate to tackle the challenges of the ecological crisis that threatens the survival of mankind. Naess & Rothenberg (1990) describe the struggle overturning western culture and its epistemological foundation with anthropocentric hierarchies in order to replace it with Biocentric egalitarianism. Biocentric egalitarianism suggests that the inherent value of all living things should be respected and that one should strive for equality between species, which can be put in contrast to anthropocentrism where it is mainly the inherent value of humans that are in focus. For example, according to deep ecologists humanity is neither less nor more important than other lifeforms on earth. Deep ecologists appreciate the diversity of life and value its richness by itself while at the same time claiming that humans do not pose any right to reduce this value except when it comes to satisfying basic needs (Naess & Rothenberg, 1990).

2.1.5 Eco-socialism
Following the Academic Version is the Ideological Version which, according to Mebratu (1998) contains the perspectives of Eco-theology, Eco-feminism and Eco-socialism. Pepper (2002) describes that Eco-socialism, similarly to Deep ecology, points at western culture and its oppression through the capitalist hegemony as the main root of the environmental crisis. Eco-socialism evolved from debates between environmentalists and socialists in the 1970s and one of its fundamental assumptions is that true, ecologically sound, SD can never be realized within a capitalist system. It also claims that the environmental crisis can only be remedied by shifting to development with ecological and socialist orientation. In contrast to Deep ecology, Eco-socialism is not biocentric but rather humanist and anthropocentric while still highlighting the importance of human spirituality. Additionally, the need for non-material interaction with nature is found as very significant. According to Eco-socialism, humanity is not a plague, pollutant or virus to this world and it is not guilty of greed, aggression, hubris, over competitiveness or some other original sin. It is the socio-economic system imposed by the capitalist hegemony that is causing humans to distance themselves from nature and thereby distancing them from themselves. Pepper (2002) explains that humans may not be like most other animals but this does not exclude non-human nature from society. In other words, the nature humans perceive is socially constructed and the further away our capitalist systems alienate us from nature, the further it separates us from a natural part of ourselves. To overcome this challenge humankind must re-appropriate its
relationship with nature and the environment through collective control and common ownership. In order to achieve SD humans must cease to exploit, try to dominate nature or try to transcend natural boundaries. Instead, focus should be on planning, managing and controlling nature and our relationship to it in order to provide for the collective good.

2.1.6 Eco-feminism
According to Braidotti et al. (1994) Eco-feminism was familiarized as a term in the mid-1970s by Francoise d’Eaubonne, a feminist writer from France, who pointed out the destruction of natural resources and overpopulation as the greatest threat to humanity. Francoise d’Eaubonne expressed that “the Male System” has to be overthrown by women since this system is the source of the threat. Only by securing the influence of the feminine gender and breaking the old system would the planet be able to sustain everyone. Braidotti et al. (1994) continues by explaining that Eco-feminism has come to hold a wide range of theoretical stances and positions. Additionally, in many of these positions a certain correlation between men’s domination of women and man’s domination of nature has often been highlighted. Hence, there are multiple interconnections between men’s domination of women and nature within Eco-feminism as it continuously points at the link between ecological and feminist issues. Since its inception, Eco-feminism has been used to change, expose and challenge dominant power structures which extend to gender relations, the meaning of words and economic systems. By combining ecology and feminism it has created powerful and influential cultural and social movements to combat the oppression of race, class, gender and nature. However, Eco-feminism has transformed into a rather decentralized movement with its diversity in combining and merging the concepts of ecology and feminism (Braidotti et al. 1994).

2.1.7 Eco-theology
Mebratu (1996) describes that the influence of religion to claim absolute truth has eroded since the spread of modern sciences, democracy and certain enlightenment philosophies. In addition, there have been major criticisms directed towards the big religions from feminist movements, among others, because of overwhelming patriarchal biases. However, partly as a response to critics emphasizing Judeo-Christian traditions as a source of teaching about man’s right to dominate nature, Eco-theology started to emerge. This movement has long been characterized by people from different religions re-inventing and re-interpreting their religious texts as well as material from other religions in order to emphasize humanity’s relationship with nature. Haught (1996) elaborates further and underline that the foundation of Eco-theology is the belief that humans merely have ignored the relevance of the ecological wealth and diversity in their religious traditions. Therefore, what is needed is to re-visit religious texts in order to find the appropriate environmental theology, which exists there, and thereby gain the tools necessary to tackle the environmental crisis. According to Eco-theology, it is simply the greed of humans that is the source of the crisis and that the remedy is to receive and nurture humility, detachment from unnecessary material things and express gratitude for the divine gift of the natural world through religion.

2.1.8 The WCED version of sustainable development
Finally, following the Ideological Version is the Institutional Version which, according to Mebratu (1998), can be represented by the definitions set by WCED, the World Business Council for Sustainable Development (WBCSD) and the International Institute of Environment and Development (IIED). First and foremost, it is clarified that the institutions share the Brundtland definition as a core element within a majority of their work which focuses on the satisfaction of needs. Although, the institutions vary, with regards to interpretation, as they all recognize different epicenters of solutions. Thus, their platforms for
solving the crisis are different and they point at different leaderships required to achieve SD. This variation is explained as a natural manifestation of the varying institutional objectives within the establishments. The position of WCED, the original commission responsible for the report “Our Common Future”, will be mentioned first in order to emphasize how the interpretation of the other institutions varies from it. Mebratu (1998) explains that the position of WCED can be summarized in that they see political consensus as the main driver, that the epicenter of solutions is connected to sustainable growth which should be advocated by nations as they are the solution platforms. Nations should in turn utilize their instruments in the form of appropriate leadership of governments and international organizations.

2.1.9 The IIED version of sustainable development
Mebratu (1998) continues by stating that it is in relation to this broad framework, set up by WCED, which a related definition was developed by the IIED. This particular definition of SD bases its foundation on the recognition of three systems which are basic in any developmental process namely: the social system, the economic system and the environmental or ecological resource system. Each system is assigned a set of goals and sub-goals by society after which SD is set as an objective through which the goals are to be achieved. The goal achievement should be maximized across all three systems by making trade-offs between them in an adaptive process. Mebratu (1998) explains that the term “Primary environmental care” is used by IIED to illuminate how to progress towards SD on a grassroots level. Moreover, increasing empowerment of people is seen as a central feature of the IIED definition. Additionally, the need for knowledge of environmental constraints is highlighted as an integral part in supporting people to discover and manage their own development. To summarize, the IIED definition focuses on rural development while counting communities as solution platforms where national and international non-governmental organizations (NGO) should lead and act as tools for change towards SD.

2.1.10 The WBCSD version of sustainable development
Schmidheiny (1992) describes the Institutional version of SD by WBCSD which can be said to embody the position of many industrial businesses and the corporate world. This definition is grounded in the commitment of business leaders to ensure that the needs of the present are met without compromising the welfare of future generations. It also claims that environmental protection is inseparable from economic growth and that the quality of life of future generations rests on the current generation’s ability to meet its basic human needs, without terminating the ecological systems on which all life depends. Schmidheiny (1992) explains that this extension of the original definition underlines economic growth as an essential part of ensuring improved livelihood for the poor, maintaining the support for growing population and finally stabilizing the overall human population. However, in order for this to be possible, new technology must be developed that can support the growth. Additionally, resources and energy must be used in a more efficient manner to reduce pollution. Furthermore, WBCSD claims that the challenge to achieve SD through clean and equitable economic growth will be of great difficulty. It is said that this challenge will without doubt test the limits of industries and businesses but that it should be possible with sound eco-efficient principles as an epicenter for solutions. Thus, this version interprets SD to be achievable through strong corporate leadership with industry and businesses as platform for solutions (Schmidheiny, 1992).

2.1.11 Weak Sustainability versus Strong Sustainability
Mebratu (1998) concludes that the majority of literature concerning Sustainability and SD can be said to arrive in the same reasoning - that reductionist thinking within science is limiting
our ability to confront the environmental crisis effectively. However, more authors are addressing this issue by looking into the relationship between reductionist and holistic thinking. Additionally, authors have also attempted to approach the environmental crisis with argumentation based on values and ethics. Ayres (2007) explains that today the general understanding concerning the concept of SD is the recognition of the ecological/environmental system, the social system and the economic system. These supposedly separate systems have become central within the environmental debate and the majority refers to them in their work. However, Ayres (2007) clarify that there is a distinction to be made between the concepts of Strong Sustainability (SS) and Weak Sustainability (WS). Each of these concepts is in turn usually linked back to the two more extreme and polarized schools of thought mentioned earlier. SS can be linked with the Limits to growth school and WS may be linked to neo-classical economists and technocrat optimists (Mebratu, 1998).

Ayres (2007) explains that WS and SS are concepts with numerous connections to different ideologies and scientific disciplines. For example, WS can be said to allow a line of thinking where it may be fully rational to substitute natural capital with any kind of human made capital, a part of a forest may be turned into some wooden houses. The concept of WS is usually illustrated with three circles that meet and overlap but not fully (Fig. 1). The three circles represent the social, economic and ecological/environmental systems and are described as highly interlinked. Through their connections these system affect each other which is described as the core characteristic of WS, the systems overlap and affect each other to some degree (Ayres, 2007). In contrast SS, as elaborated upon by Ayres et al. (2001) differs since the systems are organized in another way. SS puts the systems in a non-neutral position in relation to each other with concentric circles (Fig. 1). As illustrated, the economic system is placed in the core surrounded by the social system as a middle-layer and the ecological/environmental system as the outer layer. Ayres et al. (2001) clarifies that SS emphasizes and prioritizes the ecological/environmental system since this functional system is required for the existence of a social system which in turn is required to host an economic system. Hence, it is implied that the inner systems cannot take precedence over the outer layer which includes nature’s life-support systems. Ayres (2007) continues and explain that the mental framework set by SS highlights the importance of preserving the outer layer and making sure human activity never ignores its fragility. This is put into contrast with WS which can easily be used as a framework to advocate and support short-term strategies, strategies which often have an inherent tendency to rely heavily on a gamble of new technologies solving most problems.

Fig. 1. Model of Weak Sustainability and Strong Sustainability. Own depiction based on (Robertson, 2012, p. 1-2)
In summary, there are numerous perspectives and interpretations of what SD is, how it should be utilized and what working towards SD actually entails. The concept has branched out in various directions over the years creating different perspectives that at times conflict with each other. Moreover, while there can be said to exist similarities between these perspectives they still differ in how they focus and approach the issue of attaining SD. For example, certain perspectives might base their approach in values and ethics while others are more process-oriented, instrumental or goal-oriented.

3 Psychological concepts and theories
Focus will now shift to the psychological concepts and theories which will be used to comprehend and highlight teachers’ perception of SD in the upcoming chapters. The theories and concepts presented below will also act as a conceptual framework and highlight the challenges and opportunities the teachers face when teaching SD.

3.1 Cognitive Dissonance
In the world of universities where ideas are developed, tested and communicated teachers play a key role. Perlovsky (2013) explains that creation of new knowledge is a complex and often drawn out process due to a psychological phenomenon known as Cognitive Dissonance (CD). This phenomenon occurs when conflicting elements of knowledge are held which typically results in an underlying unpleasant feeling. Moreover, since it is usually difficult and highly problematic to act on opposing pieces of knowledge, CD theory suggests that a choice is made. A choice that in practice may result in people behaving in ways that actually contradict knowledge they claim to possess and understand. Perlovsky (2013) continues and describes that most people tend to think that they are in control of these choices and aware of them whilst, in reality, many choices are made subconsciously. Furthermore, CD theory suggests that it is typically the new knowledge which is discarded before its usefulness is proven. Thereby, inertia in accepting new theories, thoughts and perspectives is created, which is explained to be a great challenge for science and teachers within academia. The theory of CD can aid in highlighting the challenges of contradiction within the teaching of SD since both the teachers and student can be subject to CD. Another psychological theory which might provide context to delve deeper into contradicting behavior is the Theory of Normative Conduct.

3.2 Theory of Normative Conduct
Cialdini et al. (1991) highlights the importance of norms in relation to one’s attitude and behavior through the Theory of Normative Conduct. It is explained that norm, as a term, has been root to confusion which is still lingering to this day because of its implicit dual meaning. To exemplify, when talking about norms one can either refer to what is perceived as commonly done or what is commonly approved or sanctioned in a social setting. Cialdini et al. (1991) clarifies that our perception of what other people do is called descriptive norms, which in the case of this study could be the behavior of colleagues that teachers recognize as normal. Whereas on the other hand, the term injunctive norms is used to describe when a behavior is perceived as socially approved or disapproved in a given setting. An example in connection to this study might be when a teacher experiences discomfort from his or her colleagues when using an unconventional method of teaching. Cialdini et al. (1991) elaborates further regarding the role of injunctive norms as the experience of approval or disapproval of a behavior can determine whether a person continues to behave in a certain manner. Thus, both descriptive and injunctive norms as part of the Theory of Normative Conduct can be used to understand and navigate in different cultures and social contexts.
Additionally, they provide a context in which one may get a deeper understanding of the setting where the choices of CD are made.

3.3 Attitude and Behavior
Central to both the terms of CD and norms are the concepts of attitude and behavior. As mentioned earlier in the introduction, Fishbein & Ajzen (1975) points out that a person’s attitude concerning a specific concept can be treated as a proximate cause of that person’s behavior related the concept. In other words, it is said that there as an apparent link between how we think about a concept, for example SD, and subsequently how we act and behave in relation to it. Henceforth, the university teachers teaching about SD will continue to act as an example since this group is the focus of the study. Moreover, in order to delve deeper into the connection between attitude and behavior one must first be clear about what the terms mean. Holland et al. (2002) explains that an attitude can be described as a representation of the way we evaluate and integrate our thoughts with regards to our experiences and affections in relation to e.g. a concept. Attitudes can also be said to be the evaluative judgements which summarizes and integrates our way of reacting towards a concept. The strength of an attitude can vary which has implications for how resistant it will be and how much effort would be required in order to challenge and change it. Furthermore, the strength of an attitude also affects its persistence and the likelihood of an attitude manifesting in a behavior which reflects the attitude. Ajzen & Fishbein (2005) gives a brief overview of attitude-behavior research and explains that since the 1930s, there have been many researchers taking the connection between attitude and behavior for granted but that equally as many have criticized it. It is described how various authors have pointed at the weak and sometimes non-existing link between what people say and what they do. However, many revelations were made by various academics over the years which once again have underpinned the importance of attitudes and its link with behavior. Ajzen & Fishbein (2005) exemplify by pointing at more recent approaches which reinforces the importance of surrounding variables. It is suggested that attitudes may play a minor role since they are indeed significant predictors of behavior but only in certain situations and for certain individuals. It is implied that in order to facilitate for attitudes to turn into behavior numerous factors have to be taken into account.

3.4 The Reasoned Action and Planned Behavior model
Ajzen & Fishbein (2005) continue by highlighting the theory of Planned Behavior and the theory of Reasoned Action, both of which have been used to understand, explain and predict human behavior. Moreover, these two theories have been combined in order to create the model of Reasoned Action and Planned Behavior (RAPB) which can be observed in (Fig. 2). The model is described to include a wide array of factors which affect our beliefs about behavior, norms and control which in turn affect our intentions and finally our behavior. Hence, the RAPB model has been chosen to act as a conceptual framework for this master thesis in order to understand how the teachers perceive the SD concept. Additionally, a choice was made to put the challenges and opportunities teachers face while internalizing the concept into their teaching into context. The RAPB model treats various background factors as a starting point, thereafter it is divided into three different branches through which it flows until it unites in our “Intentions” that leads into our actual “Behavior”. In detail, the “Background factors” that are described to affect us are divided into three categories: individual factors, social factors and factors related to information. Within the individual factors one can find “Personality”, “Values, stereotypes”, “Experience”, “Mood, emotions”, “General attitudes” and “Intelligence”. The social factors include “Culture”, “Age, gender”, “Race, ethnicity”, “Income”, “Education” and “Religion”. Lastly, factors of information are comprised of “Knowledge”, “Intervention” and “Media”. Thereby, it is concluded that all the above
mentioned personal, cultural and situational factors are highly influential and that they can vary considerably between individuals (Ajzen & Fishbein, 2005).

As illustrated in (Fig. 2), the first branch of “Behavioral beliefs” may be treated as a function based on underlying beliefs and various “Background factors”. Fishbein (2000) clarifies that the “Behavioral beliefs” involve whether we think a certain behavior will result in a good or bad outcome. For example, if we believe that trying out a new method of teaching SD will result in a good outcome, it will also result in a high probability that we also adapt a positive “Attitude towards the behavior”. In a similar way, by following the flow of the model, it is possible to see how a negative attitude towards altering one’s method of teaching may emerge if there is an underlying belief that this will cause a negative or bad outcome. The attitudes, whether they are positive or negative in the matter, will then impact our “Intentions” and in extension our “Behavior”. Fishbein (2000) continues by describing the second branch dubbed “Normative beliefs”. It is assumed that our “Background factors” act as the foundation of what we perceive and believe to be normal and that interaction with our surroundings throughout life helps in constructing our sense of norms. Ajzen & Fishbein (2005) describes how our “Normative beliefs” move on to dictate our “Subjective norm”. In other words, what we perceive to be normal constitutes the foundation for what we believe other people think we should do. Thereby, “Subjective norms” can be said to act as a navigational tool in societies and communities since the preconceived assumptions made from known norms help people to fit in. Furthermore, this can be put into the context of this thesis with the teacher’s perception of the SD concept. For example, teachers may perceive certain norms concerning the SD concept within academia which in turn affects what they believe to be deemed more or less accepted by their colleagues. By following the flow of (Fig. 2) one can see that this perception of what is more or less accepted also impacts the “Intention” of the individual.

Finally, the third branch is elaborated upon by Fishbein (2000). It is explained that our “Control beliefs” center on our perception of what we are capable of as individuals and as a part of larger groups, what changes we are able to impose on human or natural systems and in
what way we can challenge or alter them. The next step towards “Perceived behavior control” involves reflections and evaluations of whether our ability to control a given system is effective or not. In other words, our self-efficacy, or believing in one’s own ability to reach goals, becomes central as it may encourage or discourage us to behave in certain ways. To once again exemplify with university teachers teaching SD, one may highlight the influence of the teacher in affecting the syllabus. For instance, if a teacher perceives that he or she have no say or control with regards to what the syllabus says, then he or she will likely be discouraged from any behavior that seeks to challenge the syllabus. Additionally, while observing (Fig. 2), one can observe the box named “Actual behavioral control” which can be explained by expanding upon the previous syllabus example. For example, in line with Ajzen & Fishbein (2005), a teacher may perceive a high level of control and intends to act and change the syllabus. When taking action he or she might face different levels of real-life constraints before any changes may be carried out. In this context the “Actual behavioral control” is the feeling the teacher experiences during and after facing these real-life constraints. On the one hand, if the teacher still experiences a high level of self-efficacy, the effect of “Intention” on “Behavior” will remain strong. While on the other hand, if the real-life constraints are too overwhelming to overcome, the link between “Intention” and “Behavior” will likely weaken or cease entirely. Furthermore, Ajzen & Fishbein (2005) explains that the dotted arrow from “Actual behavioral control” to “Perceived behavioral control” is to illustrate that, when there is an overwhelming real-life constraint, it will feed back and affect our perception of how effectively we think we may affect the given system. Finally, the dotted arrow from “Perceived behavioral control” to the “Intention” and “Behavior” link is explained. Since our “Perceived behavioral control” in many cases may be regarded as trustworthy it can be used as a proxy for “Actual behavioral control” which allows for an improvement in predicting some behaviors.

4 Methods and methodology

4.1 Literature review of the SD concept

A literature review has been carried out as a method to provide background for the study, as described by Hart (1998), in order to give context and a pedagogical entrance to the SD concept. Hence, the “Historical background of the SD concept – a literature review” in the previous chapter “Background”, provides a compilation of researchable information from scientific articles, journals and books to position the study in relation to existing research. As previously mentioned, the literature review and the interpretations it explores acts as a basis for understanding teachers’ perspectives articulated throughout the upcoming chapters.

4.2 Delimitations

As a mean to limit and make sense of SD a case study was conducted in Uppsala, one of Sweden’s main academic cities and focus on university teachers teaching SD. Another reason for choosing Uppsala was of practical nature as the researcher was situated there. Therefore, this thesis will include teachers from both UU (Uppsala University) and SLU (Swedish University of Agricultural Sciences). The criteria for participating in the study consisted of the following: the participants should embody the role of a teacher teaching SD on university level at either UU and/or SLU. The participants should have taught SD on either bachelor, master or PhD level and any combination of these levels are appropriate. Furthermore, the participants do not need to be currently employed at said universities as teachers but should have fulfilled the role of a teacher teaching SD. Thus, from this point onward any mentioning of the participants, for example in the form of the words “respondents” or “teachers”, will
relate to individuals fulfilling the criteria. The final selection of participants consisted of eight teachers. In accordance with Hayes (2000) these criteria of selection are used to delimit the study and in this case focus on the experiences of the teachers. In order to decide what teachers to include, a list of names with all possible candidates based on the criteria was made. A conscious choice was made to randomize the selection from the list. This was an important step since the list included teachers from the researcher’s master program in SD. Thus, by randomizing the selection any biased view possibly held by the researcher were excluded. In addition, in line with Hayes (2000), no consideration has been taken in regards to gender or age in the selection since the study does not intend to investigate differences between gender and age groups. Information regarding the final participants’ names, positions etc. can be observed in (Table 1).

Table 1: Information about participants. Own depiction.

<table>
<thead>
<tr>
<th>Name</th>
<th>Abbreviation</th>
<th>Profession/title</th>
<th>Level of teaching SD</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cristián Alarcón Ferrari</td>
<td>C.A.F</td>
<td>Lecturer</td>
<td>Bachelor, Master, PhD</td>
<td>Swedish University of Agricultural Sciences</td>
</tr>
<tr>
<td>Peter Aspengren</td>
<td>P.A</td>
<td>Educational Development Officer</td>
<td>PhD</td>
<td>Swedish University of Agricultural Sciences</td>
</tr>
<tr>
<td>Daniel Mossberg</td>
<td>D.M</td>
<td>Course coordinator</td>
<td>Bachelor, Master</td>
<td>Uppsala University/CEMUS</td>
</tr>
<tr>
<td>Peter Söderbaum</td>
<td>P.S</td>
<td>Professor Emeritus in Ecological Economics</td>
<td>Bachelor, Master, PhD</td>
<td>Swedish University of Agricultural Sciences/Mälardalen University</td>
</tr>
<tr>
<td>Nadarajah Sriskandarajah</td>
<td>N.S</td>
<td>Professor Emeritus in Environmental Communication</td>
<td>Bachelor, Master, PhD</td>
<td>Swedish University of Agricultural Sciences</td>
</tr>
<tr>
<td>Margarita Cuadra</td>
<td>M.C</td>
<td>Researcher, Teacher, Communicator, Coordinator</td>
<td>Bachelor, Master</td>
<td>Swedish University of Agricultural Sciences</td>
</tr>
<tr>
<td>Hans Liljenström</td>
<td>H.L</td>
<td>Professor in Biometry</td>
<td>Bachelor, Master, PhD</td>
<td>Swedish University of Agricultural Sciences</td>
</tr>
<tr>
<td>Per Berg</td>
<td>P.B</td>
<td>Professor in Landscape Architecture</td>
<td>Bachelor, Master, PhD</td>
<td>Swedish University of Agricultural Sciences</td>
</tr>
</tbody>
</table>
4.3 Phenomenological approach

The study makes use of a phenomenological approach and uses phenomenology as a part of its methodology - the thinking behind the choice of methods. The choice to use phenomenology is grounded in several aspects. According to Dukes (1984) this approach can be seen as appropriate when examining perceptions through interviews and when one seeks to describe and understand this perception without distorting it. Additionally, in line with Husserl (1931), one main idea behind phenomenology is to focus on ideas and concepts rather than things or what is considered as facts. Furthermore, it is emphasized how sciences concerning experiences and perceptions are highly relevant and should be treated as sciences of fact. Husserl (1931) continues by explaining how a phenomenological approach implies a search for the essence and clear meaning behind mere shallow verbal expressions. In other words, there is an emphasis on the ability to produce a clear representation of what has been experienced by providing the essence surrounding a phenomenon. Dukes (1984) clarifies that this pursuit of understanding subjective experiences is one defining feature of phenomenology. It is also elaborated upon that the researcher, as a subjective individual, has to approach other subjects and try to understand their complex reality. Thereby, what is ultimately studied is the researcher’s interpretation of others’ experiences. Furthermore, one can underline the importance of a phenomenological perspective as it centers on the position that the world cannot merely be described through positivistic research tools or perspectives. Thus, one can advocate for a phenomenological approach in examining how the SD concept is perceived and how the internalization into teaching is experienced.

As this study does not specifically test theories in a deductive manner it instead works more inductively meaning that it “…involves the search for pattern from observation and the development of explanations- theories- for those patterns through a series of hypotheses” (Bernard, 2011, p. 7). However, since the researcher has an affinity for psychology a choice was made to utilize psychological theories as a conceptual framework. This choice can be said to have influenced the formation of the interview questions which, in turn, implies that the approach of this study is not entirely inductive. The approach should rather be described as dialectic in nature or utilizing an abductive reasoning since psychological theories were chosen to understand and put the teachers’ experiences into context. Moreover, the study may also be described as utilizing an explorative approach. It is through this methodological framework that choices were made to use semi-structured interviews and thematic analysis.

4.4 Semi-structured interviews

According to Kvale, Brinkmann & Torhell (2009) interviewing can be seen as an appropriate qualitative method when it comes to studies trying to map attitudes and perceptions. Therefore, this thesis has made use of semi-structured interviews in order to gather empirical material. The semi-structured interview was chosen as a method because of its ability to, according to Öberg (2011), mimic everyday conversations while still maintaining focus within the chosen subject or field of study. In addition, in line with Kvale, Brinkmann & Torhell (2009), an interview guide was created with the research questions in mind. The interview guide is composed of three parts which can be observed in (Appendix 1). The first part contains instructions on how to use the guide, the second includes the informed consent which is read to and agreed on by the respondent before the interview. Finally, the third part consists of the interview questions and follow-up questions. The interview guide exists in English (Appendix 1) and Swedish (Appendix 2) since teachers could choose to perform the interview in their preferred language. As suggested by Öberg (2011), the interview guide was used as support during the interviews to keep track and make sure that all questions were covered. With the permission of the respondents, all interviews were recorded and transcribed.
into 116 pages of text. The material produced for each interview was transcribed into a separate Word-document. The length of the interviews ranged from 50 min to 1 hour and 20 minutes. During the transcription all interviews in Swedish were translated into English and any rare dialectal expressions were changed into their more commonly understood counterparts. Longer silences were indicated with “…” and if respondents imitated someone or expressed something they had heard the sign “:” was used at the start of the sentence. Finally, parenthesis was used to highlight laughs or if the interview was interrupted. One interview was conducted through Skype and the remaining interviews were conducted at the teachers’ offices or an empty conference room nearby, one exception being an interview taking place inside a smaller mall in Uppsala. As six teachers were interviewed in an office environment it might have affected their answers. For example, more professional rather than personal standpoints may have been highlighted unconsciously. The conditions for the interviews can be described as calm and undisturbed and there was no data loss from the recording device related to surrounding noise.

4.5 Thematic analysis

A thematic analysis, as described by Braun & Clarke (2006) was used to process the transcribed material. This helped in generating a comprehensible description of what the teachers had said, while at the same time providing a pedagogical framework through the themes that were created. Braun & Clarke (2006) explain that there are variants of thematic analysis where one can have an inductive or theoretical approach. This thesis makes use of the inductive approach. Moreover, Braun & Clarke (2006) points out that this approach could also be described as a bottom-up approach as the themes that are created through the analysis are strongly connected with the material from the transcription. Additionally, the inductive approach allows for a coding process where the researcher’s analytical preconceptions are set aside, as the material is not forced through a preexisting coding frame. However, this is in no way a guarantee for objectivity since the researcher can never be free from epistemological, theoretical and normative commitments (Braun & Clarke, 2006).

The process of inductive thematic analysis used in this study can, according to Braun & Clarke (2006), be described as divided into six phases. The first phase consists of carefully reading through the transcribed material multiple times in order for the researcher to get familiar with the texts. Familiarizing with the texts is necessary in order to focus on what respondents actually say and reduce the risk of any possible bias of the researcher to be highlighted. The second phase consists of coding the interesting parts of the material in a systematic fashion. In this case, all passages of text were marked with different colors depending on which of the main interview questions it answers. For example, responses to the five introducing questions, which can be observed in (Appendix 1), could provide answers to one of the fourteen main questions. Continuing on, the third step is constituted of the search for themes where the researcher looked for patterns recurring throughout the text. The patterns were identified based on the material itself regardless of any connection to theory or research questions. This was carried out one question at a time. To exemplify, all answers to the first main interview question was once again read through whereby sentences or passages of text of particular interest were marked and moved into a new Word-document. In this document the sentences or passages of text were sorted based on what they seemed to have in common which resulted in a number of “boxes”. These “boxes” were then given a proto-theme name based on the overarching theme of its content. Lastly, two quotes were taken from the each “box” to two create sub-themes. In other words, for each interview question, at least one proto-theme was created, each with two subthemes.
The number of proto-themes created by each interview question varied as some questions amassed more material. The total number of proto-themes created in this phase was sixteen. Thereafter, the fourth phase began where the sixteen proto-themes were reviewed. The researcher examined and searched for the weaker themes that had either too little data to support them or was too diverse. Additionally, in this step it became apparent what proto-themes were similar enough to merge into bigger ones. Thus, the fifth phase began where the most relevant proto-themes were chosen, in relation to the research questions, and merged into the final main themes. The three final main themes, with two subthemes each, were renamed and a clear definition of all main and subthemes were formulated. Finally, through the sixth phase, the three main themes were finalized by adding a descriptive text to each which retells what the teachers expressed through the focus of the created subthemes. The main points of this descriptive original text is then strengthened and underpinned by key quotes from the interviews. A choice was made to abbreviate the respondents’ names in an effort to downplay the significance of their identities and shift focus to their expressed experiences. Nevertheless, respondents’ backgrounds are indeed relevant for their perception of SD but the choice to abbreviate their names was made with the intent to emphasize their combined voice as teachers teaching SD. Moreover, to add to the transparency of the thesis, a sample of the inductive thematic analysis process can be observed in (Appendix 3).

Braun & Clarke (2006) also emphasize that themes may be identified on different levels which they refer to as either latent or semantic. The semantic approach focuses on what is explicitly stated by the respondents, it does not seek or intend to look further than surface meaning of the answers given. In contrast, the latent approach permits the researcher to examine or identify underlying assumptions, ideologies, conceptualizations or even ideologies. In the case of this thesis, a choice was made to make use of the latter approach since it was deemed a more appropriate tool to provide a richer interpretation of the teachers’ experiences.

4.6 Researcher credibility and trustworthiness

According to Golafshani (2003) when performing qualitative research by interviewing, the researcher can be considered as the scientific measurement tool as opposed to e.g. questionnaires in quantitative research. In other words, as the researcher is present in the interview situation there are many aspects of his or her behavior that could influence the outcome of the interview. Therefore, these effects were seen as threats to the credibility and trustworthiness of the study. To exemplify, Hayes (2000) explains that the researchers/interviewers academic background and epistemological affinities may unconsciously be communicated to the respondents through body language and tone of voice. In this case, the researcher had one bachelor degree in environmental science, one in psychology and an ongoing master degree in SD. This background may also have affected the process of developing the interview questions. Thus, in order to reduce these effects, their nature has been studied and reflected upon carefully in relation to this case (Hayes, 2000). Additionally, the interview questions were reviewed and discussed by peers, colleagues and the supervisor and evaluator of this thesis with the intention to highlight any possible biases. It is also important to highlight that the researcher had some of the respondents as lecturers during the master program in SD. This fact may arguably contribute positively and negatively to the research process. On the one hand, having a connection with the respondents might favor a more relaxed conversation. On the other hand, there is the risk of either party holding preconceptions about the other which potentially could affect how the interview was performed.
Another measure which was taken to increase the trustworthiness of the study was to conduct pilot interviews. In line with Hultén et al. (2007), these interviews were used to get an indication if any of the interview questions were particularly difficult to comprehend. Additionally, according to Hayes (2000) this helped to reduce the risk of internal data loss by improving and reformulating poorly stated interview questions. The pilot interviews also provided a feeling for how much time would be required for each interview, which was useful in planning the studies main interviews. Furthermore, to avoid external data loss as suggested by Hayes (2000), additional interviews were planned if any respondent would not be able to attend due to unexpected reasons. During the process there were five teachers, which the researcher approached, that could not participate due to various time restraints and hindrances. However, the quota for eight participants was met through the additional interviews and thus there was no external data loss. When conducting the interviews there were no questions that the respondents refused to answer. However, there were some questions that needed to be repeated and sometimes rephrased before the respondent answered. There was no particular question which needed repeating or rephrasing, although it seemed the longer questions had this effect on the participants more often than the shorter questions. Hence, there could be a slight internal data loss since questions were not rephrased in the exact same way for each respondent. According to Kvale et al. (2009) the skill of the interviewer is another aspect connected to the credibility and trustworthiness of a study. In this case, to summarize the researcher’s interviewing skills, semi-structured interviews have previously been conducted through a bachelor’s thesis, a group project in the master thesis program and through an individual project within a bachelor for psychology. As proposed by Hayes (2000) literature covering techniques for interviewing has been reviewed in order to reduce the risk for committing common mistakes and to further strengthen trustworthiness.

4.7 Ethical considerations

Hermerén, (2011) has through the Swedish Research Council put forth 4 requirements when conducting research with humans which this study has taken into consideration. This includes the requirement of confidentiality, the requirement to get informed how the material will be used and by whom, the requirement of an informed consent and finally the requirement to be informed about the study. Therefore, all respondents were informed that their responses will remain confidential if they choose to be anonymous. Additionally, the respondents read through and approved an informed consent (Appendix 1) in order for the researcher to start recording the interviews. At least one week before the interview took place each respondent received a document through e-mail containing information, in either English (Appendix 4) or Swedish (Appendix 5), about the study. This document informed the respondents about the criteria of selection for the study, that participation is voluntary and that they may choose to call off the interview at any time or not answer questions they feel uncomfortable with. Furthermore, the transcription and analysis process were described as well as the purpose of the study. The respondents were also informed who would have access to the material, how they might make minor alterations to the transcript, what actions that has been taken to secure the confidentiality and how the material may be used in the future. The full transcript is not included as an appendix in this study. However, respondents could give their consent in order for the material to be used in future studies. Thereby, if the transcription is sought after one may contact the researcher through which the material may be distributed on the terms of the respondents. Finally, the interview questions were reviewed by the supervisor and evaluator of the thesis a second time. The review was conducted with the purpose of identifying and removing any interview question(s) of problematic ethical nature before the interviews were conducted.
5 Results

5.1 Thematic analysis

By applying an inductive thematic analysis on the gathered material from the interviews, three final main themes were identified and formulated, each consisting of two subthemes. The first theme was given the name “How the teachers experience and navigate the SD concept” and its two subthemes were dubbed “Critical attitude towards SD - the consequences of its abstract and contradictory nature” and “Optimistic attitude towards SD, highlighting strengths and various approaches to achieve SD”. The second main theme was named “To teach SD, obstacles and opportunities in and outside of the classroom” with the subthemes “Difficulties and potentials in the relation between student and teacher” and “Challenges in planning and structuring meaningful, pedagogical and effective education for SD”. The third and final main theme received the title “Critique of societal structures and the misuse of SD in society and by colleagues” which includes the subthemes “Disagreements, misuse, and conflicts concerning the SD concept within universities” and “Solutions and alternative values to combat power-games and unsustainable exploitation of SD”. All themes presented are structured retellings of the interviews and therefore constitute the first step of abstraction in the thesis. Subsequently, in the forthcoming “Discussion” chapter, findings from the themes will be combined with theory and the interpretations of SD presented in the historical background in order to reach higher levels of abstraction. Hence, the research questions will be answered through reasoning on a more advanced conceptual and theoretical level. However, the reflections and conclusions in the subsequent chapter are fundamentally based on the response from the teachers which will be presented now.

5.2 How the teachers experience and navigate the SD concept

This theme will include and describe aspects of how the teachers perceive and relate to the SD concept in their private and professional lives. The theme will center on their experiences and attitudes concerning the concept and what strengths and weaknesses they identify. Lastly, the preferred theoretical and conceptual frameworks of the teachers will be covered.

5.2.1 Critical attitude towards SD - the consequences of its abstract and contradictory nature

The majority of the respondents express clearly that SD is not a comfortable concept for them. Additionally, a widely held opinion by respondents was that they preferred the term Sustainability in general over the more recent term SD. This critique is further elaborated by a majority of the respondents which express that they perceive SD as an oxymoron - a concept containing inherent contradictions. A minority of the respondents goes into detail and describes how the word “sustainable” and the word “development” is a poor combination. Moreover, all participants highlight that the abstract nature of Brundtland definition of SD complicates the use of the concept for academics, decision-makers and people in general. However, there are divided opinions among the teachers concerning the allegedly abstract Brundtland definition. On the one hand, a minority of them express that it is still the definition they prefer and they acknowledge some of its merits. While on the other hand, the majority steadfastly claims that the flexibility and elusiveness of the concept is one of its greatest weaknesses. Another weakness pointed out by a minority of the respondents is that it is a rather anthropocentric concept which conflicts with their own values. All participants raise the aspect of many existing interpretations of SD and several of them express that this fact influences their own ability to properly understand what SD truly entails. It is also mentioned that this sometimes impacts their teaching. More specifically, four of them express that they at times find it difficult to communicate and navigate in relation to the concept. Furthermore, all
participants note in various ways that SD can and has been interpreted in numerous ways since its inception leading to it becoming an exhausted concept. It is explained that the extensive amounts of interpretations are implemented, used and promoted by virtually any actor in society which creates a backlash on the integrity of the SD concept.

"Another problem with the concept is that it can be interpreted in so many ways that it touches upon a state of uselessness...” – P.B.

A majority of the respondents mention the ecological/environmental, social and economic systems and elaborates further on how these systems usually are put forth when discussing SD. It is emphasized how the three dimension framework and the debate on its inner workings have divided people within academia. Moreover, the majority of the respondents underline the necessity to focus more on theoretical and conceptual frameworks which identifies and puts weight on other systems, dimensions and values. This, since the current debate concerning SD is described as stagnant and insufficient. C.A.F. explicitly highlights that the concept of SD is too often isolated from other concepts and context in academic discussion. Another aspect raised by a majority of the respondents is the issues related to the balance between their professional and personal lives. On the one hand, some of them explain that Sustainability and SD thinking co-exists in a desired manner within both their private life and their profession. While on the other hand, some respondents articulate that they experience conflicting elements and feelings in regards to what they say and do. For example, H.L. and P.A. describe how they at times feel that they cannot apply the knowledge they have about Sustainability and SD.

“I try to think and live in a sustainable way, but that I am not as categorical and consequential as I should be. For me it is definitely the case that I do not live as sustainably as I should but I still reason a lot about it in my work. That is something I can say in all honesty.” – P.A.

This phenomenon is further reflected upon by P.A., H.L., and P.S. as they underline how this is a societal problem. It is highlighted how the path from attitude to behavior is complex and that knowledge is sometimes not enough in itself. Moreover, it is expressed that while the significance of SD or the fundamental existence of climate change may be clear academically, it is not guaranteed to manifest as environmentally friendly behavior in one’s personal life.

“Climate change... people accept this more and more. But they are not ready to change their behavior so much, there is a cognitive emotional inertia as we are used to a certain lifestyle.” – P.S.

Additionally, when talking about SD as a political and decision-making tool, a minority of the respondents express some reluctance over its success and adaptations into influential policy documents. This position is held by a few participants who also describe how SD can sometimes be used as a quite weak, undecided reason for action or change. For example, C.A.F. stresses that the concept says nothing substantial regarding the type of change which is needed.

5.2.2 Optimistic attitude towards SD, highlighting strengths and various approaches to achieve SD

When reasoning about the possibilities of the SD concept, a majority of the respondents highlight that some of its apparent weaknesses also can be turned into strength. The fact that
the term is flexible and may be interpreted in many ways is described as an inclusive trait that can explain part of the concepts popularity. For example, it is underlined that the concept gives opportunity and solid ground for discussion and that the many definitions and possible starting points grant the concept strength. Moreover, it is explained that fixating a definitive definition of SD would be the same as ridding the concept of one of its key strengths. Another aspect described as positive by a majority of the respondents is the increased successfulness of the SD concept in recent decades. This success is described to aid in making Sustainability and SD thinking cling to the consciousness of the public. The widespread use of the concept and discussions generated by this development is also explained as something positive with the potential to unite people for a common cause.

“...to have a concept like sustainable development is something that can create a sense of community, even if you do not know exactly what other people mean by it there is still some kind of common goal.” – H.L.

In relation to visions of SD, three respondents stress that humans are never value-free and that our actions and choices are affected by values consciously or unconsciously. Furthermore, most participants describe their own motivational driving forces and why they care for SD and/or discussions centering on what is important in life. Here, the respondents express the need for more discussion on values in universities and society, discussions concerning what kind of world we strive to create or protect. When talking about their own visions of the future and values there seems to be a division between the respondents. A minority emphasize anthropocentric approaches and values while the majority describes the need for biocentric and ecocentric values. The same respondents who expressed their affinity for less anthropocentric values also spent more time on philosophical reasoning.

“We should not look upon ourselves as separated from nature but rather as a... we should try to find a harmonic balance between our specific interests and the interests, if I may so say, that nature can hold.” – H.L.

Additionally, when talking about teaching SD the respondents’ preferred theoretical and conceptual frameworks are highlighted. A majority of them explain that they utilize holistic thinking in their teaching but also critical thinking. For example, C.A.F. expresses his preference for Critical Theory and Political Ecology among others. P.A. points at the work of Johan Rockström and Kate Raworth as important sources for his work while also highlighting the Wuppertal Prism since it adds an institutional perspective to the previously mentioned social, ecological/environmental and economic perspectives. H.L. also points out his affinity to the concept of Planetary Boundaries in order to highlight the threat against biodiversity. Furthermore, N.S., M.C. and P.B. underline their preference for theories and concepts that complement these three perspectives. P.B. exemplifies this by elaborating on how he works with the seven dimensions of Sustainability as defined in the UN Habitat Agenda. Both D.M. and P.A. underline the importance of SD as a starting point of discussion and that one does not need to focus too much on the SD concept itself but rather put weight on agreements concerning what actions should be pursued. Finally, P.S. highlights the necessity to reconsider economics, which is also mentioned by other participants, and points at ecological economics as an economics for SD. Most of the respondents connect back to the ecological/environmental, social and economic systems during the interviews and some position themselves in relation to WS and SS.
In addition, a majority of the respondents talk about the ecological/environmental, social and economic systems and underline how they prioritize them in terms of importance. Another aspect brought up is Resilience Theory which P.B. promotes by reasoning that SD should move towards Resilience Theory. This is put into contrast as C.A.F. states his critique against this theory being uncritically accepted into the education for SD. However, a majority of the respondents are unanimous in that the SD concept has potential through its strength to act as a platform for discussion and co-operation through which positive change can emerge. Additionally, the majority emphasize that it is possible to make advances by promoting holistic and critical thinking but also through encouraging sustainable lifestyles and discussions on values.

5.3 To teach SD, obstacles and opportunities in and outside of the classroom

This theme will cover difficulties and possibilities in relation to teaching about SD. The theme will center on both the concerns related to the interaction with the students and the challenges of influencing and structuring education, for example through the syllabus. Issues concerning communication, pedagogic planning and the structure of universities will be in focus.

5.3.1 Difficulties and potentials in the relation between student and teacher

When talking about the teaching situation in the classroom, a majority of the respondents express that there is a difficulty in terms of balancing the content of their lectures so it is on an appropriate level for all the students. The respondents clarify by explaining that teaching, especially within the interdisciplinary field, often brings the challenge of finding a level of communication that is neither too complex nor too simple for the students. It is also clarified that in many of the courses and programs, where the respondents themselves participate, there is often a large diversity among students. A majority of the respondents elaborate further and describe that culture, age, disciplinary background and work experience, among several other factors, separate the students and complicates the teaching. A lot of precious time, which the respondents perceive a lack of, is usually spent on trying to find an appropriate level for each group. It is explained that this affects the students in many ways since some students might find certain lectures boring and repetitive while others find it very challenging and completely new. It is also described how the respondents’ background and preference for a discipline, for example natural science or social sciences, can become a barrier in communicating with students from other disciplines. The increasing group sizes in some programs and courses are also said to add to this problem.

“I, as a natural scientist, have to talk to students mainly from a social science way of thinking. It becomes difficult to find the appropriate level in this case while at the same time I do not want the content to be too simple for the students from natural sciences. Otherwise they might feel that what I say is trivial. So finding the appropriate level for the education is one of the great challenges.” – H.L.

The dynamics in the relation between teacher and students were also highlighted as a key aspect. A majority underline that there are certain academic traditions, norms and preconceptions concerning how education is supposed to be performed. These preconceptions
are described to affect both students and teachers, as the normative relations between them are naturally recreated if not questioned. The notion of how a classroom is supposed to look like, its functions and what sort of power-relation exists there is said to have large impact on the overall teaching. Additionally, several respondents highlight that students entering university sometimes have a quite solidified view of how the world works. This is described as another aspect which may add to the difficulty of achieving effective communication between teacher and student. Furthermore, four respondents mention that they experience a lack of motivation and independency from certain students, that a considerable number of students skip non-mandatory lectures and modules. This issue is reflected upon and it is mentioned that courses and programs might be too theoretical and localized in the eyes of the students. It is reasoned that this may furthermore make students question the relevance and link between what they learn and their future work. Moreover, more direct aspects of the interaction between student and teacher are also highlighted. A minority of the respondents describe that they sense a need for authority from certain colleagues in the classroom setting. It is further elaborated by P.A. that there should of course be some order in class but that there is a difference between demanding some authority and acting authoritarian. Several respondents underline that a similar dynamic exists between students within programs but also between students of different programs. These power-relations are argued to have a negative effect on motivation and self-esteem among students as their opinions and perspectives may be suppressed.

“...well, that there is someone who knows a lot and someone who knows less, that I have no problems with... that hierarchy is okay but that a person that is professor could treat a bachelor student badly, with contempt, act superior or not listen to what they say is totally out of the picture for me. It should rather be democratic, interactive and an activating process.” – P.A.

Another aspect which is highlighted by all respondents is lack of time, energy and resources. The majority express that there is often too little time and opportunity to learn about the students and the knowledge that they bring to the class. It is also explained, in various ways that the diversity of worldviews and knowledge brought by students is essential to create rich discussions and insights. Moreover, a majority of the respondents stress that they think that the students’ learning processes would be enriched if the universities could direct resources to arrange more excursions. Six respondents go into detail and explain that more practical real-life exposures are important to make greater impact on students. More practical experience is said to provide depth in regards to teaching SD. Furthermore, most participants underline the challenge of utilizing the potential of the students, to make use of the students’ own experiences and real-life exposures in order to enrich discussions in the classroom. A minority of the respondents explain that they have time to create space and share the passions and experiences of their students to bring forth this potential.

“And when I am teaching my own course I play on that possibility, I exploit it as much as I can. Where I bring out the individuals passions and make it accessible to others which do not happen in an average classroom. Because teachers are typically busy following the syllabus.” – N.S.

In addition, a widely held concern is the experience that students may only be exposed to teachers’ theoretical and conceptual framework within a short time-frame. There is usually no preparatory work or follow-up which generates a worry that students might not undergo a proper learning process where theories and concepts stick. For example, P.S. articulates that the terminology Ecological Economics, which he teaches, might never be mentioned by other
teachers before or after he performs his lectures in the master program in SD. Moreover, four respondents emphasize that, while it is essential to point out the big global issues connected to SD, it becomes a dilemma as one cannot afford to frighten the students too much. It is clarified that focusing primarily on complex problems can overwhelm students and make them lose hope. At the same time it is also highlighted that the education cannot be untruthful to reality which in truth does pose giant challenges. Therefore, it is said to be a balancing issue and the majority reason that teaching concerning SD should be more solution and goal-oriented. However, it is underlined by four respondents that the challenge of providing a truly rich educational experience for all students can be a daunting challenge at times. The lack of time and resources to include interesting, and often popular excursions among students, adds to the difficulty of leaving a lasting impression.

“To give them experiences that can change their minds and especially their hearts... because if you do not change the mind and especially your heart, because that is the most important, then it will be difficult to make change for sustainability or sustainable development... And how do you give those experiences? That I find to be a big challenge. I mean within the four walls of the classroom...” – M.C.

5.3.2 Challenges in planning and structuring meaningful, pedagogical and effective education for SD

When talking about influencing the syllabus and curriculum for teaching SD, there is a division among the respondents. On the one hand, respondents articulate that they are quite pleased about the current syllabus or curriculum. While on the other hand, others describe that they think it is not fully thought through and that this aids in generating unwanted consequences in the education for SD. The participants who express more satisfactory experiences explain that they have a more or less integral part of creating or improving the syllabus or curriculum, they express that they are pleased with the amount of control they have in this matter. However, several respondents express how they would like to innovate further and improve the syllabus and/or the curriculum. They continue by explaining that there have been real-life obstacles hindering them, such as differing opinions among colleagues and lack of time and to focus their ideas in the right direction. Additionally, a minority of the respondents stress that they do not obtain as positive feedback from the students as when they have full course responsibility. Having more time to plan and interact with students is described to have positive effects on the sense of control compared to hosting a few guest lectures. Furthermore, a majority of the respondents highlight the lack of consistent overarching themes throughout, for example, the master program in SD. This is elaborated more in detail by some who express they experience a norm where one tries to compact SD into one course, instead of putting time into planning how it should relate to other courses. This issue is described to add difficulty to the task of creating overarching and tangible themes in education. A minority of the respondents say they experience a team-feeling and it is pointed out by some respondents that communication between teachers can be lacking at times. Moreover, several respondents explain it would be more advantageous and pedagogical to move towards a horizontal thinking in the curriculum rather than today’s vertical thinking where one can identify a lack of rationale between and throughout courses in a program.

”No, of course not because syllabuses are a part of programs and one of the main problems in master education in Sweden is that sometimes you just have different courses within a master program but the rationale of those courses together is missing... I would sometimes to describe this say a very bad pyttipanna.” – C.A.F.
A majority of the respondents underline that it is crucial to provide and plan for rich discussions, which can provide students with the communicative tools they need in their future professions. Another aspect which is emphasized is the need for exposing students to as many perspectives as possible in order to mimic the real world. Several teachers also highlight the importance of interdisciplinarity, to give students multiple points of entry into an issue by combining disciplines in search of new knowledge, insights and innovation. It is explained that in order to provide interdisciplinary teaching one must offer students organized arenas where they can discuss. For example, they should be allowed to discuss courses of action, important concepts related to SD and become aware of the values that influence them. The need for critical views of what is suggested or presented as sustainable by certain actors in society is also highlighted. Students should ask themselves what is sustainable and what development means in light of different disciplines and perspectives, so that they may question and change unsustainable societies into sustainable ones.

“So, the interdisciplinary perspective is incredibly important to highlight, that no science alone or human or perspective may solve these issues by itself. There needs to be cooperation to do it.” – H.L.

Furthermore, when talking about what knowledge and attitudes the respondents wish to pass on to the students, many of them connect back to their preferred theoretical and conceptual frameworks. However, they clarify that they do not wish for students to uncritically accept their ideas or attitudes but rather consider them, reflect and take their own positions. As previously mentioned, holistic and critical thinking was what most respondents wished for the students to adapt from the teaching. In addition to this, some respondents highlighted the importance of looking at the context of society and its history to understand why SD might imply different things in different parts of the world. The role of democracy was also highlighted as the majority expressed their wish for students to fully embody their place in society as aware and responsible citizens. Finally, respondents underlined their will to pass on an attitude of being agents of change that are confident and willing to take certain risks in order to tackle the complex problems in our world.

“I hope that they are totally and utterly convinced that we do have problems on earth and I also hope that they will grow a passion for solutions, to design solutions and to change from unsustainable development to sustainable development. I hope that they build this in in their education and in their whole career.” – P.B.

5.4 Critique of societal structures and the misuse of SD in society and by colleagues

This theme will include and describe the teachers’ perception of how well SD is taught by their colleagues and used by the universities in Uppsala. Furthermore, the theme will also highlight some clashing interests that the teachers experience at the universities. Moreover, the theme will also focus on the teachers’ critique of current societal structures, power-games and examples where the teachers perceive that SD is exploited for selfish gain. Finally, the teachers’ suggestions, visions and hopes in relation to these issues will also be highlighted throughout the theme.
5.4.1 Disagreements, misuse, and conflicts concerning the SD concept within universities

A majority of the respondents emphasized that they experience an attitude among colleagues which fully acknowledges the fact that our current state of the world is unsustainable. Additionally, the attitude is said to contain the position that human activities are the main source of big issues such as climate change. They also feel that most of their colleagues, working with SD teaching, share the respondents’ critical opinions towards reductionism in general. Most of the respondents also state that there is a general consensus among colleagues that the global situation is more ominous than in Sweden. Furthermore, respondents emphasize that many of their colleagues tend to lean on and sympathize with the Brundtland definition of SD. However, there is division among the respondents themselves at this point as some of them stress that they prefer to focus on other definitions of SD and/or the term Sustainability.

“I think most people go to the original definition from the Brundtland report and that is what I would do also.” – M.C.

“...as you noticed in my essay before, I used the word sustainability consciously and not sustainable development.” – D.M.

Moreover, it is underlined by several respondents that the many interpretations of SD are clearly manifested in their working environment. It is described by several of the respondents, working at SLU, that there can be said to be conflicts of interests visible among teachers and other influential figures which are not mentioned by name. It is also pointed out that these conflicts can be transferred to students through teaching and discussions which could play a role in generating oppressive atmospheres among students. Examples brought up by respondents are the discussions of conventional versus ecological farming and which method could be considered to contribute the most to SD. This issue is said to generate a tense atmosphere and even different camps among teachers and researchers at SLU as opinions differ. It is further elaborated that there seems to be both academic and personal motives behind the various positions. Moreover, the respondents reasoning around this issue express concern and worry that the clashing interests is affecting colleagues and students negatively. However, all of the participants who highlight this issue clarify that they do not feel they are intertwined or affected much by this issue personally. Additional topics, where opinions are said to divide the people of SLU, was the issue of meat production and consumption. Another aspect brought up by respondents teaching at SLU, was their experience that other teachers have expressed reluctance to accept the SD concept into their teaching. It is clarified that this position was more of an occurrence some decades ago but that the attitude still lingers in different shapes and forms since it is regarded as politically incorrect. Furthermore, the reluctance to accept the SD concept is described to take form in behavior where no particular effort is put into internalizing the concept as an overarching theme, for example in master programs at SLU. Sometimes the concept is concentrated into a short-time period and subsequently let go or it can be missing altogether from syllabuses or teaching material. The respondents explain that they experience these values and attitudes as existing norms and behavior among other teachers at SLU.

“...there is the feeling of: Alright, now that is over with and now we do not need to think sustainably any more. Then there are programs geared this way where this way of thinking is the norm.” – P.A.
A minority of the respondents underline that they have heard many colleagues express frustration when their students come and say that they want to learn more about SD which they have just had a lecture about. It is described that sometimes the message of the teachers is not clear enough, that they fail to convey that they are teaching SD in many ways. If a teacher fails to convince students that what they teach is relevant for SD it is a huge loss of opportunity. Some of the respondents explain further that they also understand these teachers since they face similar challenges of successfully communicating a complex message themselves. However, a majority of the respondents express that, in their view, SD is often taken for granted by researchers and teachers which is one reason for confusion among students. It is clarified that researchers and educators in universities use SD without reflecting or problematizing what they mean by it.

“This applies to researchers who many times use the concept sustainable development in a very uncritical way, something which you see everywhere in Uppsala, in the two universities, people just talk about sustainable development and they take it for granted.” – C.A.F.

Additionally, a majority of the respondents describe their disapproval of how certain concepts are used by colleagues and through extension their students. For example, it is highlighted that there are inherent values connected to considering the ecological/environmental, social and economic systems as equally important in relation to each other. Corporate Social Responsibility (CSR) and Environmental Economics were other concepts which a few respondents underlined as inherently normative. Another aspect raised by four respondents was how the SD concept is used and presented towards students. Here, the respondents emphasized that titles of lectures and courses sometimes tend to be misleading in relation to its content. It is also mentioned by a few respondents that they experience a culture where students choose courses with long and fancy names mainly for their CVs. This problem is reasoned to link back to certain educators who put effort into innovative names for lectures but less effort into the lecture’s content. Furthermore, it is also mentioned that SD, as a concept, can be subject to exploitation even within universities where it can be interpreted to satisfy motives such as promoting a certain normative view. A majority of the respondents give examples of when they have seen SD being interpreted to create something which could be seen as more contradictory than the original concept.

“I have to go back and take a photo of that poster which talked about sustainable exploitation. I mean that is a contradiction which is to say we exploit and scrape right to the bottom and call it sustainable. What are we doing then? It is not even an oxymoron but it is just stupid.” – N.S.

5.4.2 Solutions and alternative values to combat power-games and unsustainable exploitation of SD

A majority of the respondents emphasize the role of the current economic systems and structures of the western world in regards to SD. These respondents highlight concepts and theories such as Neo-classical Economics, Environmental Economics, Cost-Benefit Analysis, capitalist hegemony and some of them mention mainstream economics. The various aspects of economics are elaborated upon further as respondents describe how SD is impaired by existing within a framework, where the previous mentioned concepts and theories are dominant. Furthermore, it is clarified that striving for SD within a specific context without questioning the current way of organizing society is problematic. Several respondents point out that the SD concept can be used and exploited by political actors and businesses to
strengthen the already existing values, for example in a capitalistic society. Although, it is also pointed out by P.A. that it is not a one-sided relation and that SD may be able to promote alternative values and transform a capitalist society from within. It is however the former more critical position, of SD being exploited by capitalistic values, that is expressed by a majority of the respondents. Moreover, a few respondents underline how Gross National Product (GNP) and Gross Domestic Product (GDP) are highly inappropriate measuring tools in relation to their own preferred take on SD. Additionally, a few respondents point out that economic growth is perceived as something entirely good by far too many people. Concern is also expressed regarding the attempt from neo-classical economists to put a price on ecosystem services, turning non-monetary resources into commodities.

“I think there is so much of a tendency to return to conceptual frameworks which is largely dominating, for example neoclassical economics but more and more is happening in terms of questioning that theoretical perspective... but we have a long road to go still and I think education has a key role.” – P.S.

A majority of the respondents underline that they dislike when actors in society utilize SD as a tool for achieving selfish and monetary gain. They express that there are many examples of this where, for example, a company uses SD as part of their narrative or CSR strategies to attract customers. When examining the outcome and consequences of the activities of said company, it can be obvious that the intention is rather to earn money than pursuing ideals of improving the world. This phenomenon, which some of the respondents call greenwashing, is also described as something which can be unintentional. It is clarified that within academia and society there are many people with good intentions. However, uncritical thinking and lack of knowledge can turn their efforts into support for the same structures which gave rise to the problems they sought to combat in the first place. Moreover, several respondents highlight that SD is often used as part of companies’ CSR strategy to e.g. sell food produced under poor conditions, harming both humans and the environment.

“I mean when people for example mix or use sustainable development in their effort to promote corporate social responsibility depending on what company we are talking about, I think that is very problematic.” – C.A.F.

When talking about societal issues in relation to SD, a majority of the respondents highlight the role of culture and lifestyles. Several respondents express that they experience western culture to be generally portrayed as unproblematic, that striving to live as an average American is the norm. The respondents also experience that the task of shifting into a sustainable lifestyle is portrayed as uncomplicated. This is elaborated as highly problematic since the necessary global changes are described as immense and often underestimated. Furthermore, several respondents explain that maybe too much responsibility and weight is left on the individual. Here, the role of culture is once again emphasized as the respondents describe how our consumer society and western lifestyles creates a form of inertia to shift into alternative lifestyles. People in society are described to be comfortable with the way they live and that the logic of everyday life distracts them from reflecting on larger issues.

“I would say that mainstream culture drives us towards the precipice. It makes us both unhappy and pleased at the same time. It gives us small shots of satisfaction and then as with sugar, very soon you get hungry again. So you need to repeat it, you need to scratch all the time, you need to stimulate yourself all the time a little bit.” – P.B.
While culture is pointed out as an obstacle it is also highlighted as a powerful force for positive change, P.B. even refers to culture as “the true engine of sustainability”. Furthermore, the majority of the respondents express that they perceive a strong unanimity in society, that there is something wrong which needs to be fixed. It is also explained that Swedes, in general, are quite knowledgeable about SD issues but that the situation is quite different in big powerful countries such as America, China, Russia and India. Moreover, it is elaborated by most respondents that the recent increase of political unrest has resulted in a rise of dissatisfaction in many parts of the world. The subsequent increase of frustration, insecurity and fear is said to be taken advantage of by political parties. For example political parties such as the Swedish Democrats in Sweden and political figures such as Donald Trump in the United States of America. The current refugee situation is also highlighted by several of respondents who express concern about how it is handled by different countries. A majority of the respondents also underline that there are numerous power-games connected to wars, corruption and coalitions between large industries which act both as obstacles and distractions for positive change. Additionally, the gap between the rich and the poor is also explained to add to the feeling of injustice and dissatisfaction. It is further explained that all the political tensions and power-games add great difficulty to the already difficult task to redirect societies from unsustainable activities. Furthermore, a few respondents emphasize that there should be more subsidies, taxes and regulations in Sweden which would contribute to a more environmental friendly society. Yet, to promote such policies is described as a big challenge in a world where numerous other pressing matters demand attention.

“If one would work thoroughly, consistent, consequentially and in a long-term manner with sustainable development one would have to make numerous uncomfortable political decisions.” – P.A.

However, most of the respondents express that they observe events and changes in society that keep them hopeful. Some mention the United Nations Climate Change Conference which was held in Paris 2015 and emphasize how it went beyond expectation. Furthermore, it is expressed that the SD concept seems to have received an enhanced positive reputation during the last decade. However, a minority of the teachers articulate that they sometimes wish for a better concept altogether which could address the issues of the world more effectively. For example, M.C. specifically points out that the Brundtland definition of SD mainly addresses material aspects of life and that even if people have lots of material things it does not guarantee happiness. M.C. also describes the definition as lacking a spiritual aspect or something which would grant it deeper meaningfulness. A majority of the respondents also underline that there is a fundamental need to discuss values in relation to SD in order to make it clearer what values should be protected and maybe prioritized. Finally, the respondents relate back to their work and reflect on how they could influence people’s behavior and attitude through various means.

“if I would start something new today I would create an alternate set of educational institutions, not universities which are locked into certain frames but institutions that allow people in society to examine their life in other ways... and not for credits.” – N.S.
6 Discussion

The following chapter will discuss, interpret and combine theory, findings from the literature review and thematic analysis in order to answer the research questions. As a reminder the research questions are as follows:

- How do university teachers understand and perceive the sustainable development concept and how can their relation to the concept be described?
- In what way is the sustainable development concept internalized into their teaching and what are the challenges and opportunities the teachers face in this process?

The various themes in the last chapter illuminate many underlying factors concerning the teachers’ perception of the SD concept. To summarize, the first main theme “How the teachers experience and navigate the SD concept” provides insight concerning the first research question. Additionally, the first subtheme “Optimistic attitude towards SD, highlighting strengths and various approaches to achieve SD” sheds light on how the teachers prefer to approach SD in their work, which connects to the second research question. Furthermore, the second main theme “To teach SD, obstacles and opportunities in and outside of the classroom” offers further insight into the problems posed by the second research question. Lastly the third main theme “Critique of societal structures and the misuse of SD in society and by colleagues” arguably provides aspects relevant for both research questions.

6.1 Examining the role of norms – the second branch of the RAPB model

The third main theme provides both a deeper understanding of how the respondents relate to the SD concept and offers a more reflective position on how SD is taught by colleagues. Thereby, when considering the role of descriptive and injunctive norms within the Theory of Normative Conduct, as elaborated upon by Cialdini et al. (1991), one can assume that the respondents’ reflections of their colleagues work can be seen as a foundation for what the respondents perceive as norms. Moreover, when examining the subtheme “Disagreements, misuse, and conflicts concerning the SD concept within universities” one can observe how different stances relating to SD may be socially sanctioned by others on campus. This connects back to the role of injunctive norms which emphasizes that what is perceived as against or in line with norms, in a certain context, will likely influence individual behavior. In other words, the working atmosphere may be seen as an influencing factor when teaching about SD. For example, several respondents from SLU mentioned an observed reluctance to adapt SD into master programs, syllabuses and teaching material even if it should be promoted by Swedish university law (Svensk Högskolelag, 1992:1434). Additionally, the tendency to comprise SD into a short timeframe instead of an overarching theme is also perceived as a norm by a majority of the respondents. These are merely some examples of descriptive norms which may contribute to the respondents’ perceived injunctive norms in their working environment. However, it is important to note that seven out of the eight respondents were primarily based at SLU which implies that coming discussions concerning working environments will refer to SLU.

Moreover, by once again observing the RAPB model (Fig. 2), it is possible to place the respondents’ descriptive norms, as elaborated upon by Cialdini et al. (1991), into the box named “Normative beliefs”. Based on the various background factors of the model, the respondents’ experiences of their working environment can be said to be represented by this part of the model. Furthermore, the previously mentioned injunctive norms manifested in tense atmospheres and varying opinions among colleagues can subsequently be placed in the box named “Subjective norm”. In other words, the term injunctive norms constitute key
aspects of the “Subjective norm” in the same way descriptive norms constitute key aspects of the “Normative beliefs”. Connecting the expressed experience of the respondents with the model can be seen as an important step to gain a deeper understanding of the context in which the respondents teach SD. The subject of norms and their influence on the respondents’ “Intention” and “Behavior”, in relation to the SD concept, will be covered further in coming paragraphs.

6.2 Investigating respondents´ preferences and the first branch of the RAPB model

In order to thoroughly provide an answer to the first research question, focus will now shift to combining findings from the first main theme with theory and several of the interpretations of SD highlighted in the chapter “Historical background of the SD concept – a literature review”. Firstly, based on the findings of the first main theme, it could be argued that a majority of the respondents lean towards the Limits to growth school, a school of thought previously elaborated upon by Mebratu (1998). However, this does not imply that most of the respondents are on the radical end of the spectrum between the Limits to growth school and the optimist economics and technocrats. Based on the apparent affinities for certain interpretations of SD among the teachers, it could rather be suggested that a majority of them lie somewhere in between the equilibrium and the Limits to growth school. For example, many respondents explicitly pointed out the western society way of living as an epicenter for crisis which is a typical trait of Deep Ecology elaborated upon by Naess & Rothenberg (1990). P.B., P.S., M.C., H.L. and C.A.F. all spent time emphasizing and critiquing current western lifestyles and/or the consumer society. C.A.F. and P.S. were specifically adamant to point out the capitalist hegemony and Neo-classical economics as central obstacles for effectively managing the environmental crisis. Thereby, one can draw parallels to the Eco-Socialist perspective, elaborated upon by Pepper (2002), which questions the fundamental suitability of capitalism as the way to organize society. Both C.A.F. and P.S. may have stressed this perspective primarily but other respondents also raised this issue in various ways. As evident throughout the main themes a majority of the respondents emphasized social and ecological/environmental perspectives. However, one key aspect both uniting and dividing the respondents, in their way of relating to SD, is whether they prefer to approach it from a biocentric, ecocentric or anthropocentric perspective. For example, P.A. is one of the respondents who claim to utilize an anthropocentric perspective in his work. However, he is arguably reluctant to take a definitive position between e.g. Environmental economics and Ecological economics. Thus, P.A. could be argued to take a position closer to the equilibrium, between the Limits to growth school and the optimist economists and technocrats.

To continue answering the first research question, one may highlight the respondents’ preferences for certain perspectives in the light of the RAPB model (Fig. 2). The preferred theoretical and conceptual frameworks mentioned in subtheme “Optimistic attitude towards SD, highlighting strengths and various approaches to achieve SD” can be connected to the box “Behavioral beliefs”. In this case, one can assume that the respondents believe that using their specific theoretical and conceptual frameworks will result in positive outcomes. Furthermore, by following the reasoning on the model by Ajzen & Fishbein (2005), it is possible to make connections between the “Background factors” and the “Behavioral beliefs” of the respondents. Moreover, it may be argued that some of the respondents’ “Background factors” such as “Values, stereotypes”, “General attitudes”, “Experience”, “Education” and “Knowledge” are hinted upon in the main themes. For example, the majority expressed that they perceive SD as an oxymoron and prefer the term Sustainability, a position which will likely affect their “Behavioral beliefs” concerning their teaching about SD.
Another aspect which can be said to affect the teachers’ perception of SD is how it is used by their colleagues. As previously mentioned, subtheme “Disagreements, misuse, and conflicts concerning the SD concept within Universities” puts emphasis on what the respondents believe to be faulty implementation of the SD concept. By keeping the critique found in this subtheme in mind, one may once again observe the model (Fig. 2) and add the various stances expressed to the “Behavioral beliefs” box. For example, a majority of the respondents highlighted that the meaning of SD is taken for granted by colleagues and used in an uncritical manner. Thereby, this position may act as one example for “Behavioral Beliefs” and what approach is perceived to result in negative outcomes. Thus, one can get a clearer understanding of how the respondents relate to the SD concept. Furthermore, by highlighting beliefs about what approaches are more or less appropriate according to the respondents, one can move into the next box “Attitude towards the behavior” and discern more crystalized representations of the respondents understanding and relation to the SD concept. For example, one may highlight the respondents’ attitudes towards certain utilizations of the SD concept. Thereby, as a partial answer to the first research question, one may conclude that a majority of the respondents perceive the SD concept as a tool for discussion which can be used to highlight other important concepts and values. The controversial flexibility of the SD concept is both praised and cursed but all participants acknowledge its potential to unite people and create a feeling of striving for a common cause. However, it is strongly underlined by the respondents that, in wrong hands, the concept of SD can be turned into a tool for unsustainable exploitation. This critical stance against using the concept uncritically without problematizing its usage in a transparent way is clearly reflected by the respondents’ statements. Thereby, parallels can be drawn between SD and Conceptual stretching, described by Sartori (1970), who underlined that the meaning of concepts can be broadened to increase range of application. However, by straining a concept, in this case SD, to fit into a larger world it also becomes more vague and elusive.

6.3 Intentions and subsequent challenges when teaching SD

Following the flow of the RAPB model (Fig. 2), “Attitude towards the behavior” moves into “Intention”. In this aspect one can identify some of the respondents’ intentions under the subtheme “Challenges in planning and structuring meaningful, pedagogical and effective education for SD”. Arguably mirroring a consistency among the participants are the intentions to pass on certain knowledge onto their students. For example, a majority of the respondents emphasized the need to promote holistic and critical thinking and the importance of discussing values while focusing on solutions for different contexts. Furthermore, “Intention” can certainly be seen as central to the second research question, as it can be assumed that the challenges in connection to teaching SD is connected to what the teacher wishes to pass on to students. Thus, in order to provide answers to the second research question focus will shift to some interesting findings from the second main theme.

In the second main theme “To teach SD, obstacles and opportunities in and outside of the classroom” many challenges and opportunities are highlighted in relation to internalizing the SD concept into teaching. Several interesting findings within this theme indicated that the teachers face a multitude of challenges both preparing courses and lecture material as when directly interacting with students. When interacting with students during lectures, one of the most commonly mentioned difficulties were the time-consuming task of finding and adapting to a level of communication which all students can follow. For example, students from a natural sciences background might struggle with some basic concepts within social sciences and vice versa. It seems that varying levels of experience, differing cultures and clashing ideologies among students also raise the difficulty of finding middle-grounds for rewarding
discussions. In addition, it also became clear that a majority of the respondents desired more time and resources in order to provide more impactful learning experiences for students. As expressed by the respondents, such experiences could be manifested through e.g. more excursions where the link between theory and practice could be enhanced. Another challenge found problematic to various degrees was the task of bringing forth and utilizing students’ previous experiences to enrich the overall learning. However, the potential of diverse classes was also described as a great opportunity for interdisciplinary learning and creating a more dynamic learning environment. By highlighting the third quote in subtheme “Difficulties and potentials in the relation between student and teacher” by N.S., it can be noted that drawing out the potential of a diverse group of students demands a lot from teachers. Aside from time and resources, it can be proposed that a fair amount of experience, competence and comfort in the role of a teacher is required to draw out the potential of students. It could be argued that in order to fully understand and utilize the dynamic of different disciplines and worldviews among students, teachers need to possess extensive experience in many fields of knowledge. Thus, when teaching SD numerous challenges are connected to the classroom situation and interaction with students.

Other challenges the respondents face in the process of teaching SD are related to planning, working with pedagogics and improving syllabuses and curriculums as evident in subtheme “Challenges in planning and structuring meaningful, pedagogical and effective education for SD”. In this theme, respondents’ answers seem to indicate that both students and teachers experience a lack of an overarching consistency concerning SD in various programs. It is greatly emphasized that instead of focusing time and resources into making the rationale between courses more apparent, most educators opt for focusing the SD concept into concentrated segments. The lack of SD as an overarching theme within certain programs appears to upset many respondents while some of them also highlight an absence of a team-feeling and communication between teachers. Keeping this in mind, it might be safe to assume that one of the greatest challenges for teachers teaching SD is to know which aspect of SD to focus on. If communication between teachers, contributing to e.g. the master program in SD, is poor it could potentially cause repetition of the basics of the SD concept. As expressed by the respondents themselves, time is a precious resource and any time wasted could have been spent on delving deeper into a subject.

6.4 Exploring the third branch of the RAPB model

Once again by returning to the RAPB model (Fig. 2), focus will now shift to the third branch constituted by “Control beliefs” and “Perceived behavioral control”. As Fishbein (2000) points out, “Control beliefs” concerns an individual’s perception of what he or she is capable of individually or as part of a group. By revisiting the subtheme “Challenges in planning and structuring meaningful, pedagogical and effective education for SD”, one can observe how the respondents’ opinions differ concerning the syllabuses and curriculums. By placing this insight in the “Control beliefs” box of the model, one may move on to the “Perceived behavioral control” box. Within the subtheme it is also possible to discern that respondents experience a varied degree of control in relation to improving syllabuses and curriculums. For example, a majority of the respondents stress the need for a more coherent message of SD throughout programs but only several express that they have the time and possibility to work towards such an improvement. Thus, it can be assumed that only some respondents perceive a greater sensation of control in relation to syllabuses and curriculums.

Reflections of control in relation to the communication with students are also apparent in subtheme “Difficulties and potentials in the relation between student and teacher” and
"Disagreements, misuse, and conflicts concerning the SD concept within universities". Within these subthemes one can observe how respondents describe the difficulties of making strong impressions on students with the teaching material. Additionally, the phenomenon of students displaying disinterest and laziness also seem to act as a discouraging factor for the respondents describing it. Additionally, it is not merely the respondents’ own sense of control over their communication which is mentioned but also the communication of their colleagues. Thus, a clear problem can be said to appear. If there is a feeling of miscommunication between students and their teachers teaching SD, one might assume there is a need to improve the structure and planning of courses and programs. However, in line with Fishbein (2000), if several teachers experience a low “Perceived behavioral control” in relation to influencing and improving syllabuses and curriculums, there might be reluctance to engage in such behavior. Consequently, since there appears to exist a low “Perceived behavioral control”, both when it comes to improving syllabuses, curriculums and communicating with students, teachers are faced with a big challenge. Additionally, this may pose large problems as it is not only mentioned to be an issue among the respondents themselves but also among some of their colleagues. Thereby, one can suggest that SD teachers should make efforts to exercise control in order to combat further vagueness and conceptual stretching of the SD concept.

It could also be assumed, based on the subthemes, that the low “Perceived behavioral control” among some respondents and their colleagues is connected with their experience of “Actual behavioral control”. In other words, it is likely that the respondents, and several of the colleagues they mention, have made real-life attempts to improve and alter syllabuses and curriculums but faced overwhelming obstacles. Furthermore, in line with Ajzen & Fishbein (2005), it can be said that if these obstacles are perceived as too difficult to overcome it is likely that the teachers will be discouraged from further attempts at making improvements. However, here the teachers’ self-efficacy plays a key role since if a teacher is determined and strongly believes in his or her ideas then one may expect continuous attempts to work for change. Based on the interviews and the themes generated in this study, it could be said that a majority of the respondents possess a high self-efficacy including those who point out difficulties when trying to improve syllabuses and curriculums. However, several respondents do seem to express an amount of fatigue and frustration that their full potential to improve education is obstructed by factors such as lack of both time and effective systems within academia. Moreover, bearing in mind the limitations of this study in terms of number of participants, a suggestion for further studies could be to investigate the experiences of a larger number of teachers, for example at SLU. Considering the importance of teachers being able to improve courses and programs, it might be relevant to look further into what teachers perceive as obstacles and examine thoroughly what obstructs them in this process. The empirical contributions and insights provided by this study could potentially aid in such a process.

6.5 Understanding the roles and influences of CD

Connected to both research questions is the theory of CD, a theory elaborated upon by Perlovsky (2013). As previously mentioned, CD describes a process where conflicting elements of knowledge concerning a subject can cause inertia to accept and utilize new knowledge or ways of thinking. By connecting findings throughout the three main themes with the theory of CD it is possible to provide additional answers to both research questions. In relation to the first research question it can be said that CD plays a role in how the respondents relate to the SD concept. For example, based on the findings, it can be argued that the teachers hold different ideological positions and prefer certain approaches of working with SD. Springing from these different positions, for example more biocentric or anthropocentric approaches, are attitudes and behavior which act as a foundation for how new and possibly
conflicting information about SD will be treated. In other words, it is safe to assume that the respondents’ “Background factors”, as shown in (Fig. 2), are central in their understanding of the SD concept. More importantly, is that the respondents’ current understanding of SD will act as a foundation and thereby predetermine why they might experience CD. One example can be taken from subtheme “Critical attitude towards SD - the consequences of its abstract and contradictory nature” where H.L. and P.A. describe their experiences of not being able to apply their knowledge of SD to certain aspects of everyday life. Furthermore, another interesting finding can be said to connect the respondents’ perception of SD in society with CD. Thereby, CD may be used both to understand the dilemmas of the respondents but also the dilemma that the respondents seem to observe among people in western societies. Here, the quote by P.S. in the first subtheme can be underlined where he points out that people accept climate change but that behavioral change does not follow automatically. P.S. continues by pointing at what he calls “cognitive emotional inertia” caused by people being used to a certain lifestyle. This phenomenon can arguably be said to appear in the third quote of the last subtheme by P.B., who among other respondents emphasize the difficulties of avoiding unsustainable lifestyles while living in western consumer societies. Thus, one may conclude that the respondents describe an ongoing CD in society where many are aware of how to live more sustainably but still choose unsustainable lifestyles. To clarify, the conflicting elements of knowledge in this case could be knowledge of sustainable choices against knowledge of western norms.

In relation to the second research question, CD arguably plays a key role in the challenges the teachers face when teaching SD. In the context of a classroom it can be assumed that generating and managing CD among students is one of the teachers’ main tasks. This can be argued since in order for students to learn something new it might be necessary to compare previous knowledge with the new knowledge, a cognitive process which may include conflicting elements between the old and new knowledge. However, this should not be mixed up with consciously generating confusion among students but rather as a necessary step in order understand and/or accept new theories and perspectives. For example, in subtheme “Difficulties and potentials in the relation between student and teacher” the respondents emphasize the need to challenge previous preconceptions among students in order to provide foundation for rewarding discussions. In other words, it can be assumed that teaching SD involves the need to provide students with theoretical and conceptual tools needed to challenge previous experience, knowledge and worldviews. Thus, CD can be said to play a dual-role in relation to the second research question. The mere occurrence of CD may sometimes act as a necessary step within learning but it also poses a great challenge when it creates inertia to accept and/or understand new knowledge. For example in subtheme “Disagreements, misuse, and conflicts concerning the SD concept within universities” respondents point out that if colleagues fail to communicate a clear message when teaching SD it is a huge loss of opportunity. It can be assumed that in these cases students might stay in a state of confusion potentially resulting in CD. In other words, since a teacher may fail to convey new knowledge successfully it may result in students discarding that which conflicts with their current knowledge, experiences and worldviews. Another challenge connected to CD can also be identified within this subtheme as several respondents said they have experienced, and are still to some degree experiencing, reluctance from colleagues in regards to accepting the SD concept into their teaching. This problem may also partly be explained by CD among said colleagues.
6.6 Revisiting the second branch of the RAPB model

The reluctant attitude towards accepting the SD concept, which is said to still linger to some degree at SLU, bring us back to the concept of norms. Descriptive and injunctive norms, as elaborated upon by Cialdini et al. (1991), are said to affect individual behavior which is why the RAPB model (Fig. 2) will be revisited. The middle or second branch of the model consisting of “Normative beliefs” and “Subjective norm” provides a reminder that our perception of norms affects our “Intention” and ultimately our “Behavior”. Even though teachers may experience a certain “Perceived behavioral control” in relation to their teaching of SD and an “Attitude toward the behavior” of utilizing certain approaches, social settings and norms will still impact their intention to some degree. Hence, an interesting finding in the subtheme “Disagreements, misuse, and conflicts concerning the SD concept within universities” will be examined further. A majority of the seven respondents primarily based at SLU, explained in various ways that there are certain conflicts of interests at the university which generate a tense atmosphere among researchers, teachers and students. The promotion of certain agricultural strategies such as conventional versus ecological farming acted as an example of what could be treated as an epicenter of the conflicts. This finding could be seen as particularly interesting since it can be assumed that norms, in relation to these conflicts and disagreements, are generated through time. Furthermore, even if several of the respondents express that they are not affected negatively by the conflicts themselves, it is underlined that other researchers, teachers and students are. Therefore, considering the significant effect of “Normative beliefs” and “Subjective norm” in relation to “Behavior” (Fig. 2), a second suggestion for further studies could be to look into the norms regarding these conflicts at SLU. Moreover, such studies could for example seek to both identify norms and examine further how they affect teachers and researchers in their professions.

In order to return and add additional depth in answering the first research question, focus will shift to the last subtheme “Solutions and alternative values to combat power-games and unsustainable exploitation of SD”. In this subtheme emphasis is put on how SD is misused in society and how the misuse is facilitated through societal structures. Moreover, by looking into what respondents consider as misuse of the SD concept, it is possible to gain further insight on how they relate to the concept. Additionally, one may point at the respondents’ perceived societal norms as part of their “Normative beliefs” and “Subjective norm” in (Fig. 2). For example, while examining the last subtheme, one may observe that a majority of the respondents express a disliking of actors utilizing the SD concept as a tool in order to achieve monetary gain or other selfish goals. Thus, one can draw parallels with the institutional version of SD by WBCSD which is elaborated upon by Schmidheiny (1992). According to this version of SD, sound eco-efficient principles should act as an epicenter for solutions, along with strong responsible corporate leadership from businesses and industries. Based on the findings in the last subtheme it is possible to assume that a majority of the respondents perceive a lack of responsible leadership and sound eco-efficient principles. For example, several respondents highlighted irresponsible CSR practices and underlined how the true interests of certain businesses can be cloaked by a concept such as SD. In other words, perceiving the SD concept as an easily exploited tool may be treated as a common feature of how the respondents relate to the SD concept.

Furthermore, it is possible to draw parallels between the respondents’ perception of the SD concept and the IIED’s definition of SD, a definition elaborated upon by Mebratu (1998). In subtheme “Critical attitude towards SD - the consequences of its abstract and contradictory nature” one may observe a division among respondents concerning the three system approach which is an integral part of, for example, the IIED’s definition of SD. The focus on the
economic, ecologic/environmental and social systems is described by respondents as common practice within academia when discussing SD. However, the respondents have divided opinions in this matter with regards to what they perceive as a more appropriate direction for the SD concept. On the one hand, several respondents explain that they can sympathize with the thinking of three systems if it follows the line of thought present in SS thinking (Fig. 1), elaborated upon by (Ayres, 2007). In other words, respondents agree that there is an order of priority between the three systems which implies that economic systems can exist within social systems but only within the limits of environmental/ecological systems. While on the other hand, other respondents express that the three systems approach is not enough, that it is a reductionist way of approaching SD. For example, as evident in subtheme “Optimistic attitude towards SD, highlighting strengths and various approaches to achieve SD” several respondents express their disliking of WS thinking, underlining that a WS framework allows for easy exploitation of the SD concept. As an alternative, respondents highlight the need to advocate theories, concepts and interpretations that include more perspectives in order to fuel discussions that could lead in the right direction. Thereby, by identifying this division among the respondents one gains further insight into how the teachers relate to the SD concept. Additionally, since this division is said to exist among colleagues it can also be assumed that there are “Normative beliefs” concerning the subject which can affect the respondents through a “Subjective norm” (Fig. 2).

When further examining the last subtheme “Solutions and alternative values to combat power-games and unsustainable exploitation of SD”, it is possible to discern mixed feelings of hope and distress concerning the state of the world and the role of the SD concept. For example, respondents explain that they experience a rise in popularity of the SD concept which has brought about positive change. However, unstable political situations, power-games, corruption and irresponsible exploitation of both humans and nature worry them. The different experiences expressed by the respondents in this subtheme should be considered highly relevant, both as a part of their perception of SD but also as a description of the societal norms they perceive and are affected by. The fourth quote in the last subtheme by P.A. may act as an example as he clarifies that the already difficult tasks of working towards SD is made even more challenging in today’s societal context. This problem may be understood further by once again linking the teachers’ experiences with “Control beliefs” and “Perceived behavioral control” in the third branch of the RAPB model (Fig. 2). In line with Kenis & Mathijs (2012), and the earlier reasoning on improving syllabuses and curriculums, teachers may be discouraged to advocate SD if they hold beliefs telling them their efforts are futile in a larger societal context. Moreover, the subject of how teachers perceive their work concerning SD as a benefit to society may be regarded as a third suggestion for further studies. Examining the teachers’ ambitions to consciously influence society through their research and teaching could be an interesting topic for future investigation.

6.7 Summary
By combining all previous reasonings made between the respondents’ experiences and the RAPB model (Fig. 2), it is possible to distinguish a more crystalized image of how the respondents perceive and relate to the SD concept. Additionally, it also possible to reach a clearer understanding of what factors limits or reinforces their efforts of teaching SD. First, one may observe the “Background factors”, to the far left in the model, and draw the conclusion that the respondents differs from each other in many aspects. For instance, one can observe how the respondents’ different “General attitudes”, “Values, stereotypes”, “Education”, “Knowledge” and “Experience” affects their “Behavioral beliefs” and “Attitude toward the behavior”. This is evident in their varying stances in relation to the SD concept and
their preferred approaches in teaching it. For example, throughout the main themes one can detect a division among the respondents where a majority prefers the concept of *Sustainability* before SD. While they acknowledge the increased popularity and usage of the SD concept, it is still regarded by the majority as an abstract, contradictory and easily exploited concept. Even though it is underlined that the SD concept could play a key role if used appropriately, at least half of the respondents state that it might be better to put effort into identifying alternatives. Nonetheless, a majority of the respondents still emphasize the importance and potential of the SD concept which is reflected in their various suggestions of how to utilize it. Thus, as part of answering the first research question, one can conclude that there is huge variety of positive and negative attitudes towards the SD concept among the participants.

However, the model’s first branch of “Behavioral beliefs” and “Attitude toward the behavior” only constitutes one part of the respondents’ reality. Consequently, this highlights the disputed link between attitude and behavior since attitudes alone may fail to predict an individual’s “Intention” and “Behavior”. It is through the second branch of the model where additional context to the respondents’ perception is given through the influence of “Normative beliefs” and “Subjective norm”. As previously elaborated upon, there is a wide array of perceived norms within the respondents’ working environment. Hence, by highlighting the various mentioned disagreements among the respondents’ colleagues, it is possible to understand that the working environment might influence respondents’ perception and relation to the SD concept. For example, the described norm of compacting SD into a brief segment in various courses and programs may impact the respondents or other teachers “Intentions” and “Behavior” in their teaching. The somewhat hostile atmosphere regarding conventional versus ecological farming which is described to exist at SLU can serve as another example. In other words, one can assume that the respondents’ perception of SD, and in extension their teaching, is influenced or affected by these perceived norms.

Finally, the third branch consisting of “Control beliefs” and “Perceived behavioral control” is taken into consideration (Fig. 2). Relevant for answering both research questions is the sense of control that the respondents perceive in relation to the SD concept. Throughout the main themes the respondents identify a wide array of challenges, both in relation to their own teaching but also through observing and listening to their colleagues. For example, one may highlight the previous mentioned difficulties to improve syllabuses and curriculums. Since the respondents are divided in this matter it can be assumed that, on the one side, respondents experience a higher “Perceived behavioral control”. While on the other side, there are respondents experiencing low “Perceived behavioral control” discouraging them from influencing syllabuses and curriculums. Although, improving the teaching for SD might be accomplished in alternate ways. Keeping in mind that “improvement” may be considered as relative to the respondents’ academic and/or personal views and there is also the possibility to influence students in the classroom situation. However, by emphasizing the lack of a team-feeling mentioned by a few respondents, it could be proposed that teachers might not share their perspectives with colleagues on a regular basis. Thus, the possibilities of improving the sense of team-feeling could be an important subject for further studies. Another suggestion could be to investigate higher power-hierarchies within the education system to look for clashing interests which might cause problems for teachers at universities.

To summarize, there are divisions among respondents concerning their level of influence both inside and outside of the classroom. When observing the “Intention” box of the model (Fig. 2), it is possible to see how the three branches converge and thus provides insight into how many factors that influence the respondents. The respondents’ attitudes, perceived norms and sense of control over their work all play a part in shaping their “Intention” and “Behavior”.
Moreover, when reviewing the overarching context of the respondents it is evident that their challenges are of both **Ontological** and **Epistemological** nature. As previously mentioned, there are different preferences among respondents regarding what SD is or ought to be. This division, which places some respondents closer to the **Limits to growth school**, is one example where **Ontological** differences among respondents can lead to **Epistemological** challenges. In other words, the diversity of **Ontological** beliefs among respondents and their colleagues may partly explain difficulties to co-operate. Thus, one may argue that the issues concerning the lack of a team-feeling and the absence of a rationale between courses in master programs could be traced to various divisions among teachers. However, as a final remark it can be pointed out that throughout the main themes the great majority emphasized the potential of the SD concept - to act as a platform for discussions on values and uniting people for a common cause. This approach can be said to share elements with Elliott (1999) who advocates continuous democratic discussion on what SD is. Thus, it can be stated that even if the respondents are divided in many aspects, there is still unanimity that the SD can be used for positive change in the hands of capable people with the right intentions.

### 7 Conclusion

In the introduction of this thesis two research questions were posed. The following paragraph provides a summary and answers to the first research question: How do university teachers understand and perceive the SD concept, how can their relation with the concept be described? Whereas the subsequent paragraph offers key findings and answers to the second research question: In what way is the SD concept internalized into their teaching and what are the challenges and opportunities the teachers face in this process?

The findings of this study suggest there are numerous aspects that both unite and divide the respondents in their perception of the SD concept. On the one hand, there is unanimity concerning the potential of SD to be used as a tool for positive change. The concept is widely perceived as a powerful international instrument, capable of generating meaningful discussion concerning values and visions for the future if used appropriately. However, on the other hand, numerous aspects create divisions between the respondents in terms of how they relate to the concept. Various preferences for certain approaches in teaching SD suggest an ideological pull towards the **Limits to growth school** of thought. The respondents showcase a diverse variety of views concerning the theories and concepts they deem appropriate for approaching SD in their teaching. Furthermore, findings indicate a division between the preference for biocentric, ecocentric or anthropocentric perspectives among respondents. For example, there can be said to be clear ideological preferences among several respondents connecting to **Deep ecology**, **Eco-socialism** and SS. There are also tendencies to disregard the commonly used categorization of social, economic, ecological/environmental systems in favor of theories and concepts deemed less reductionistic. In addition, SD is widely perceived as an abstract and contradictory concept, sometimes called an oxymoron, and that its many weaknesses indicate a need for a better alternative. However, a majority of the respondents underline key strengths in regards to the flexible and interpretative nature of the SD concept. The RAPB model (Fig. 2) sheds light on the findings from the thematic analysis and reveal several social norms relating to the respondents work environment. These norms, which are said to produce tense atmospheres at SLU, may be regarded as an influencing factor on how respondents perceive the SD concept. Thus, one can conclude that the way respondents perceive the SD concept varies greatly. While there are intersections where their views seem unanimous, findings suggest that numerous differing ontological and epistemological standpoints results in respondents perceiving SD quite differently compared to each other.
There were numerous findings in relation to the second research question. First, when internalizing SD into the teaching, a majority of the respondents described how they put effort into pedagogical planning which advocates students’ holistic and critical thinking. However, respondents expressed a great variety of issues connected to pedagogical planning, interacting with large groups with various academic and cultural backgrounds and managing their own time and resources. For example, the majority highlighted a missing rationale between courses in master programs with regards the SD concept. Several issues connected to communication with students were emphasized. For example, respondents underlined that it is difficult to find the appropriate level of difficulty which everyone can follow when teaching students from various backgrounds. This issue is described as time-consuming, more frequent as the amount of students per class grows in size and it is also said to occur among colleagues. Additional findings suggest that respondents need more time with students in order to understand their progression and make use of the students’ previous experiences to enrich class discussion. Moreover, respondents clearly experience a strong feeling of lack of time and resources. A majority of them find it challenging to make strong impressions with students without excursions which are helpful in connecting theory with practice. Finally, the RAPB model helps illuminate that several respondents experience a lack of control with regards to improving syllabuses and curriculums. Thus, to conclude, respondents can be said to face numerous challenges teaching SD. Tackling these issues effectively will most likely require comprehensive structural and pedagogical planning in relation to programs and courses. Finally, when undertaking the never-ending task to improve education, it can be suggested that strengthening the communication and the team-feeling among teachers should be prioritized.

8 Acknowledgement

Firstly, I would like to express my deepest gratitude for the respondents who participated in the study. It was truly an interesting and enjoyable process to interview everyone and I hope that the findings of the study will be useful in addressing the many challenges within education. I would like to thank my supervisor Hans Peter Hansen for guiding me through the process, providing support and confidence for the subject. I would also like to thank my evaluator Erica von Essen for all the helpful advice in improving the final product. I also want to thank all my classmates and friends that have given me advice and strength while writing. Last, but certainly not least, I want to thank my beloved Amalia who have steadfastly supported me throughout the final semester.
9 References


Appendices

Appendix 1 - Interview guide (English)

Part 1: Instruction
Once the respondent is ready to begin the interview the interviewer will start by reading the informed consent which must be approved before the interview starts. Thereafter, the interviewer explains what actions have been taken to ensure confidentiality. Here the respondent is also informed of the choice to not answer some of the questions or cancel the interview if it is deemed too intrusive or sensitive. The next step is to activate the record function on the dictaphone and ask whether the respondent approves the informed consent in order to have it documented. The interview is then initiated and the interview questions are asked to the respondent. Usually the questions are asked in the order they are written but sometimes it may be necessary to switch between them in order to follow the respondent's reasoning in a more natural way. When the interviewer and the respondent agree that all questions have been answered as thoroughly as possible, the interview ends and recorder is turned off. Thereafter, the interviewer thanks the respondent for taking time to participate and proceeds to answer any questions that might surface.

Part 2: Informed consent
In the following interview that we will conduct, there will be questions for you to reflect on. The purpose with this study is to examine the perception of university teachers teaching SD, in order to analyze and determine how they perceive and make use of the SD concept in their teaching. The 7 other participants in this study has either taught or are still teaching about sustainable development at Uppsala University and the Swedish University of Agricultural Sciences. Your participation and the information shared will be treated confidentially meaning that no personal information will be kept which could be traced back to you, as well as potentially sensitive information about other parties which will be removed or censored. It is of course up to you to decide whether to participate anonymously or not. The dictaphone is used with the purpose of recording the interview word by word. I will be the only one to have access to the recording. The material collected from the interviews will be used in my master thesis. The audio recording will be deleted once I have received a grade on my master thesis. One potential risk from participating in the interview could be that reflections may be set in motion, reflection that could be perceived demanding in various degrees. On the other hand, benefits might include reflections leading to new knowledge and perspectives. As a reminder, you can choose not to answer questions that you feel uncomfortable with and you may interrupt or pause the interview at any given time. If you have any questions or thoughts after the interview you can contact me or my supervisor using the contact details included in the mail you received previously.

Do you agree that I record this interview?
Do you accept the informed consent?
Good, I will repeat the question regarding the informed consent when I start the recording in order to assure your approval. The interview will now begin (the recording function is activated here).

Part 3: Interview questions

Introducing questions:
To start off, I would like to ask where you are from. Where were you born and raised?

What would you describe as the main driving factors that got you into the profession as a teacher?

Were you interested in the concept of sustainable development before you started to work as a teacher?

In which position and field do/did you work? How long have you worked with this?

Have your teaching about sustainable development been on bachelor, master or PhD level?

Main questions:

1. What do you think about when you hear the word sustainable development?

2. How do you relate to the sustainable development concept? Would you say that you have a personal relation to the concept or is it strictly academic/professional?

3. What do you consider to be the main strengths and weaknesses of the sustainable development concept?

4. Is there any particular interpretation (or version) of sustainable development that you feel is more strongly advocated by the university or your colleagues? If that is the case, which interpretation(s) is advocated and by whom?

5. What would you describe as factual when it comes to the sustainable development concept? Are there any “truths” that most people agree on according to you?

…

6. How would you describe your way of working with the sustainable development concept? Feel free to describe how you work with the concept. How do you make use of and approach the concept in your work?

7. Is there any particular interpretation (or version) of sustainable development that you advocate? In that case, which one(s) why? Do you perceive that you are able to implement this particular perspective in your teaching?

8. Do you feel that the syllabus allows you to teach about sustainable development the way you would like? If not, what kind of change would you advocate for in order to improve teaching about sustainable development?

9. What would you say are the main challenges you face when implementing the sustainable development concept into your teaching?

10. When it comes to the interaction with the students, what would you say is the most problematic aspects of teaching about sustainable development? What works and what is especially difficult?
11. In what way do you hope to affect students’ attitude towards the concept through your teaching?

…

12. Is there any specific interpretation of sustainable development that you dislike? In that case, which one(s) and why?

13. Could you give an example(s) when sustainable development is misused and implemented in a faulty manner? Can you give any general examples in society or examples within education?

14. How would you describe the role of the sustainable development concept(s) in society today? What role do you think it should play?

Follow-up questions
- What are your thoughts surrounding this?
- How does this make you feel?
- How do you relate to that?
- Could you provide with an example? / Could you exemplify?
- Why do you think that is?
- Could you elaborate on this further?
- What do you mean by…
- In what way?
Appendix 2 - Intervjuguide (Swedish)

Del 1: Instruktion

Del 2: Informerat samtycke

Godkänner ni att jag spelar in intervjun?
Godkänner ni det informerade samtycket?
Bra, då vill jag bara säga att jag kommer upprepa frågan om ni godkänt det informerade samtycket när vi börjar intervjun så godkännandet kan säkerställas. Då startar vi intervjun (här startas diktafonens inspelningsfunktion).

Del 3: Intervjufrågor

Introduktionsfrågor:

För att inleda tänkte jag börja med att fråga var du kommer ifrån. Vart växte du upp?

Vad skulle du beskriva som de mest drivande faktorerna till att du började arbeta som lärare?
Var du intresserad av hållbar utvecklings konceptet innan du började arbeta som lärare?

Vilken position har/hade du, vad är/var ditt område? Hur länge har du arbetat med det?

När du undervisar/undervisat om hållbar utveckling, har det varit på grund, master eller doktorand nivå?

**Huvudfrågor:**

1. Vad tänker du på när du hör det ordet hållbar utveckling?


3. Vilka anser du vara de huvudsakliga styrkorna och svagheterna med konceptet hållbar utveckling?

4. Finns det någon särskild tolkning (eller version) av hållbar utveckling som du upplever framhävs mer av universitetet eller dina kollegor? Om detta är fallet, vilka tolkningar anser du framhävs och av vilken part?

5. Vad skulle du beskriva som fakta när det kommer till konceptet hållbar utveckling? Finns det några ”sanningar” som de flesta är överens om enligt dig?

…


7. Finns det någon särskild tolkning (eller version) av hållbar utveckling som du gärna framhäver? Om detta är fallet, vilken/vilka och varför? Upplever du att du har möjlighet att implementera denna/dessa perspektiv i din undervisning?

8. Känner du att läroplanen tillåter dig att undervisa om hållbar utveckling på det sätt du skulle föredra? Om inte, vilken slags förändring vill du framhäva för att förbättra undervisningen om hållbar utveckling?

9. Vilka skulle du säga är huvudutmaningarna som du möter på när du implementerar hållbar utvecklings konceptet i din undervisning?

10. När det kommer till själva interaktionen med studenterna, vad skulle du beskriva som de mest problematiska aspekterna med att undervisa om hållbar utveckling? Vad fungerar och vad är svårare?

11. På vilket sätt hoppas du genom din undervisning påverka studenternas attityd gentemot hållbar utvecklings konceptet?
12. Finns det någon specifik tolkning av hållbar utveckling som du inte tycker om? I sådana fall, vilken/vilka då och varför?

13. Kan du ge något eller några exempel på när hållbar utvecklings konceptet missbrukas och implementeras på ett felaktigt sätt? Kan du ge generella exempel i samhället eller exempel från utbildningssystemet?


Följdfrågor:
- Hur ser dina tankar ut kring detta?
- Vilka känslor väcker detta hos dig?
- Hur skulle du säga att du förhåller dig till detta?
- Kan du ge något exempel?
- Hur kommer det sig att det är så tror du?
- Kan du utveckla det vidare?
- Hur menar du då?
- På vilket sätt menar du då?
Appendix 3 - Inductive thematic analysis process sample

Below one may observe an example from the third phase where all text providing answers to the first main interview question has been moved into a document. One can also observe how passages of interest have been marked. These passages where subsequently moved into a new document.

H.L.: Well… It is a way where one tries to combine a thinking… The earth has finite resources which cannot be overexploited which implies that we need to exploit it a smart and effective way. But at the same time there needs to be some sort of development of our society… and human activity and civilizations. That is where the balance is important between the economic, ecologic and social if one focuses on these main pillars within traditional sustainable development thinking… To try to find an appropriate balance between these different goals for our actions here on this planet…

D.M.: The feeling is not that it is this super positive connotation and that it is something that we probably carry as a concept as you noticed in my essay before I used the word sustainability consciously and not sustainable development.

P.B.: I think about an oxymoron and this word is very strange, it is a contradiction and it is a… something which has the wrong… hierarchy of concepts. I think sustainable development should be about nature and the human. It should not be about let us say ecological sustainability and economic sustainability which it has come to be, economy comes last for me.

C.A.F.: I think first who is using this term, in which context and what kind of meaning the person or institution or organization given to the term. And then I obviously relate this to the academic literature that offers quite critical views on sustainable development so I never take for granted what people think about sustainable development, it is always a question, what do they mean, for which purposes, in which context and finally what is behind the use of the concept.

N.S.: I belong to the school which said that it is an oxymoron and I truly have understood that ever since…

P.S.: if one was speaking about sustainable development at that time but I wrote an article called ecological imperatives for public policy as a kind of ethics for public policies. And the main idea was that there should not be a degradation of the natural resource base for future generations in your own region and outside your own region, you should avoid that since this was also a risk philosophy.

M.C.: Yeah, I mean that there are so many definitions of sustainable development that I find for myself and how do I communicate this? I mean it is difficult to communicate something that has so many definitions as discussed in the course. I still find it hard and struggle myself in how to communicate it because it easily becomes very abstract…

P.A.: I also think that it is about deciding what type of ideology you have in relation to sustainable development and I have decided that I think in an anthropocentric way.

The following paragraph represents the content of one of the “boxes” which would become one of the sixteen proto-themes. This particular “box” turned into the proto-theme “Pitfalls and opportunities of the SD concept”. In order to create two subthemes for the proto-theme the passages of text were sorted into two separate groups. Afterwards, the most heterogeneous and defining sentence or paragraph of the groups were marked with italics. These defining sentences marked with italics acted as inspiration for the naming of each subtheme. Finally, the subthemes were named “SD is abstract and can be interpreted and exploited into meaninglessness” and “Strengths of the SD concept and how it should be used”. Out of the sixteen proto-themes which were formed the most relevant were used to formulate the three final main themes.
Proto-theme - Pitfalls and opportunities of the SD concept

Subtheme 1: SD is abstract and can be interpreted and exploited into meaninglessness

D.M.: I think it would be different in that sense and I think the biggest weakness in the whole thing is that it is very open to interpretation, it can be used by anybody without others challenging... others using it in a way that might be meaning the total opposite of what you would normally think to include in it.

C.A.F.: And also it becomes as very ideological thing in the way that ideologies for me is not a negative thing in itself... but it becomes a kind of ideology of the same system that some people sometimes think they are criticizing. But they say: so now in this society we have problems with sustainability in Sweden bla bla bla and therefore we need sustainable development. But that is not enough because you are not recognizing what are the problems of sustainability in Sweden. So then you do not identify that, if you do not understand that... how can you make the connection between the problem you have and the sort of solution that you propose which many times is sustainable development.

H.L.: One weakness that I would begin with is that it is difficult to come to a consensus regarding the concept, what it means and what it stands for. In addition I think it is problematic to get people in general to understand what you are talking about, I think this is a difficulty still present today. Also to communicate what it means is difficult, I think even within the scientific community there are different viewpoints of this or rather I know this is the case. Just as the thing I previously mentioned, about the three pillars, there are also different opinions how they work together within academia.

P.A.: The weakness is that there is too much time spent into trying to define what sustainable development is which then leads to fights about details when we really should focus on what we should do. I am thinking of a concrete example here at SLU as there has been quite a bit of fighting and arguing about ecological farming and conventional farming, between the people advocating these two methods from a sustainable development perspective.

P.B.: ... the main weakness of the concept is that it is contradictory to talk about sustainable and development at the same time as some kind of... as some kind of unity because it is not. Most of the analytical and political foundation for the development part of sustainable development is about economics and economics has. I would say theoretically and unpractically very little to do with sustainability in the sense that... economy come into play when we have sustainability in the natural resource management and social resource management. When that works we can start to think about practical ways of exchanging resources which is economy.

P.B.: The strength of the concept is that in some way there is a human preconception of sustainability that it is to take care of nature and to take care of values, internal values which could be some kind of constant value if you would like. And people unite in this preconception of sustainability and it is very important and shown at the last big summit where countries actually agreed on something about sustainability, something concrete as well. So it is needed with this fuzzy and contradictory concept... to use it for some time.

N.S.: Sustainable development unfortunately or fortunately has been adopted as a part of the UN goals to replace millennium development goals and that is positive and negative.

C.A.F.: Weaknesses are many and one is that it is used in a normative way without allowing people to explain what the problems are. So, people just argue for sustainable development and they are avoiding the fundamental questions of trying to describe what is the problems we have. And depending on that, depending on the definition of the problem, you will have different definitions of sustainable development so it should be put very clear. I mean people sometimes do not ask the question of capitalism, right. Although, we know that the kind of social system we have both in Chile and Sweden is a capitalistic system, so when you just say sustainable development in this context you have to clarify if you are arguing for continuing to reproduce the capitalistic system but making it sustainable and seeing this as a way of development.

N.S.: Then I guess the last point is... sustainable development with these 3 dimension approach... that has been around for 15 years without too much criticism.

P.B.: Another problem, yes... Another problem with the concept is that it can be interpreted in so many ways that it touches upon a state of uselessness...
Subtheme 2: Strengths of the SD concept and how it should be used.

N.S: Yes... I think, finally the word sustainable has begun to stick in society at least among the learned class and that is positive.

N.S: It is positive because a world which is goal oriented... maybe some measurable criteria will be used and it will be adopted and pursued... so that is positive as well. The millennium development goals despite them being in the talk for so long and since we reached the end point of that and have not reached any of them sufficiently... and when the UN and the world community decided to replace that with sustainable development goals... the positive there is that there is a commitment to think about the planet and the people together. That is positive.

C.A.F.: Well, first it can at least create a discussion, it opens up the space for discussing something.

P.B.: What else... well, it is a strength if you just understand that sustainability can be defined from many starting points and many ways, then it becomes stronger and stronger I would say.

P.S.: I think of course that some people might not think it is clear and so on but for me it is clear enough and... I do not know of any competing concepts. I think the strength is perhaps that you realize that when you work for sustainable development you understand that it is not only an academic thing, it is about ideology and a change in ideological orientation in society which can be considered a strength of the concept. But some that do not want to hear about it, they may say that it is not so clear but for me it is relatively clear when you discuss in terms of non-degradation of the natural resource base for future generations. So it is useful when you assess alternatives of choices in a decision-making position.

M.C.: The main... Well, the weakness can be a strength because it is so vague and so wide and as I said that can be a weakness that then there are so many definitions but then there is also strength in that because you could say that: ah, this is sustainable because...

M.C.: Another strength would be... I mean it has been able to join so many people together as I said it came back in 1987 when you might not have even been born (laughs). So, I mean so many people all over the world have been speaking about this and tried to implement it and discussed it which I think is very important... that we are talking about this at least. So that is a big strength.

H.L.: And that it is a concept that can be communicated between researchers within different disciplines. It is possible to talk about it within social sciences, humanities and natural sciences and even if different aspects are empathized there is still a common vague idea of what it is.

P.A.: It is when the discussion begins about what is sustainable when it becomes interesting as it is complex... that is what the education is all about is believe, how one compares and relates different perspectives.

P.A.: It should be more that sustainable development is something that you agree on with everyone, that it is something we need and that we do not discuss too much what it means. You rather discuss the common point of entry when it comes to sustainable development: how do we actually do this? That is where more energy should be spent according to me.

D.M.: I think it is, I mean it is clear enough in the sense that it actually... it states something obvious that is indifferent from everything else so it is much stronger in communicating something than for example if you add just the word green to something.

D.M.: But also, then again a strength in the concept is that it can be critiqued, it is not a given kind of utopian concept that cannot be critiqued, it is very open to critique.

H.L.: A strength of the concept would be that it does not lock itself into place with a strict definition, the weakness then turns into a sort of strength. This in turns gives humanity a vision, which might differ between people but it is still a vision of how we would like our world to be. I think this is one thing that drives people and to have a concept like sustainable development is something that can create a sense of community, even if you do not know exactly what other people mean by it there is still some kind of common goal.

P.A.: The strengths I think are that you can use it as a platform for discussion and most people understand what you mean if they only learn a bit about what is sustainable or not.
As previously mentioned, sixteen proto-themes were formed all of which can be observed in the list below. The fourth phase of the inductive thematic analysis consisted of the researcher reviewing these proto-themes in order to identify the ones most relevant for answering the research questions. The fifth phase consisted of finalizing the three main themes by working on a higher abstraction level and using the most relevant proto-themes as building material.

1. What SD is and what it should be
   Subtheme 1: SD today
   Subtheme 2: Different opinions on what SD ought to represent

2. Sustainable development when questioned and critiqued
   Subtheme 1: SD is unpractical, seen as an oxymoron and the term sustainability is preferred
   Subtheme 2: SD is a complex concept and seen as oxymoron because it is isolated from other concepts

3. The teachers’ personal and/or professional relation to SD
   Subtheme 1: The complex transition from knowledge and attitude to behavior
   Subtheme 2: Sustainability and SD thinking, part of the professional life or both one’s private life and profession

4. Pitfalls and opportunities of the SD concept
   Subtheme 1: SD is abstract and can be interpreted and exploited into meaninglessness
   Subtheme 2: Strengths of the SD concept and how it should be used

5. Barriers and shortcomings within and between universities and colleagues
   Subtheme 1: Shortcomings and challenges deriving from conflict concerning the SD concept and clashing interests
   Subtheme 2: Reflections and critique on the preferred conceptual and theoretical frameworks used among colleagues and the universities

6. Perceptions of public consensus and questioning the current systems
   Subtheme 1: Questioning mainstream economics and the capitalistic hegemony
   Subtheme 2: Consensus regarding climate change, planetary boundaries and that today’s world is unsustainable

7. Approaches and teaching methods for SD
   Subtheme 1: To provide foundation for open and critical discussion among students and use pedagogic planning
   Subthemes 2: Pluralism, holism and interdisciplinarity in the center of teaching

8. Different approaches to attain SD
   Subtheme 1: Ideologies, philosophies and policy agendas for SD
   Subtheme 2: Theoretical frameworks and concepts for SD

9. Split opinions concerning the syllabus and planning within academia
   Subtheme 1: Perceived control over the flexible syllabus and curriculum
   Subtheme 2: The missing rationale between courses and limited influence over the syllabus and curriculum

10. The challenges of time, resources, planning, competence and pedagogics within teaching
    Subtheme 1: Limitations within the profession as a teacher
    Subtheme 2: Determination to include all students and cover many disciplines

11. The task of effective teaching and communication
    Subtheme 1: To find the appropriate balance level between disciplines
    Subtheme 2: The normative expectations on the relation between students and teachers

12. Challenges and opportunities in the classroom
    Subtheme 1: Reflections on the interplay between teacher and student and limiting factors for successful communication
    Subtheme 2: The teacher’s perception of the students’ worldviews, their potential as individuals and as an interactive group

13. What the teacher wishes to pass on to the student
    Subtheme 1: The importance of holism, interdisciplinarity, acknowledging complexity and to critique reductionism
Subtheme 2: To encourage and empower students to create meaningful experiences needed to tackle SD issues

14. The need for holistic attitudes and critique of current systems
   Subtheme 1: Critique of GDP, certain attempts to use SD to promote CSR strategies and the reluctance to consider alternative economics
   Subtheme 2: Highlighting the importance of complexities, multidimensional thinking and bio-centric and eco-centric values

15. SD as a more or less effective tool for the common good or selfish gain
   Subtheme 1: Critique of lifestyles and cultures ignoring the need for change and using SD as a means to attain selfish and/or monetary gain
   Subtheme 2: Critique of the SD concept and the difficulties for teachers and people in general to use it appropriately

16. Status of SD and the world today, complications and hopes
   Subtheme 1: The role of mainstream culture, global power games the and gap between rich and poor
   Subtheme 2: Democracy, justice and solutions
Appendix 4 - Information for the participants (English)

My name is Emil Karlsson and I am studying master in sustainable development at Uppsala University and Swedish University of Agricultural Sciences. I am currently in my last semester writing my master thesis where I am looking for 8 teachers to interview. The purpose of the study is to examine the perception of university teachers teaching sustainable development, in order to analyze and determine how they perceive and make use of the sustainable development concept in their teaching.

Participation is voluntary and the criteria for participation are as follows: One should have or currently fulfill the role of acting as a teacher teaching in the field of sustainable development at university level, either at Uppsala University and/or the Swedish University of Agricultural Sciences. In other words, one does not need to be employed as a teacher since it is rather the fact that one has taught sustainable development at university level which is important. Only one interview will be conducted which is expected to take around 60 minutes. As a suggestion, the interview can either be conducted in a booked room or the teacher’s office, we can together agree on what seems the most appropriate. In other words, we agree on a time and place for the interview but the main period for data collection is week 8-11 (22nd of February – 18th of March)

As a participant, you are free to choose which questions to answer and you can cancel the interview whenever you want. Everything in the study is kept confidential, your name is replaced with a number and any other parties or individuals who may be linked to you is replaced with e.g. Institution A and/or Colleague B. Thereby, all data that could potentially compromise your anonymity is treated with censorship or removed completely. It is of course up to you to decide whether to participate anonymously or not. Since I wish to transcribe, meaning that the content of the interview is written down word by word, I would like to record the interview. The audio recording, the transcription and any notes will be erased or destroyed when the thesis is approved and I have received my grade. Only those considered competent can see or handle this material during the process, which in this case is me, the thesis supervisor and evaluator. The collected material is analyzed using a qualitative analysis method.

After the interview has been conducted and the transcription is completed, it is also possible to read the material and point out if any minor changes might be necessary. With respect to the analysis process the deadline for any minor changes is the 25:th of march. Additionally, it should be mentioned that no material will be used for anything other than my master thesis without your approval. Potential risks connected to the interview might be that it opens up for questions considered heavy. On the other hand, the interview might bring positive change through reflections that lead to new knowledge and perspectives on one’s surroundings. Finally, it can be mentioned that it is possible to give approval for further use of the transcript since it surely would be of use for research within the field.

If you have any questions regarding the study, the contact information to me and my supervisor is found below:

Researcher, Emil Karlsson: tel. 073-032 32 97 e-mail. emilkarlsson910204@hotmail.com
Supervisor, Hans Peter Hansen: e-mail. hans.hansen@slu.se
Hejsan!


Efter att intervjun genomförts och transkriptionen är färdig finns även möjlighet att läsa materialet och påpeka om någon mindre ändring behöver göras. Den 25 mars är slutdatumet för att påpeka några sådana eventuella ändringar med hänsyn till analysprocessen. Tilläggsvis ska nämnas att inget material kommer användas för publicering till något annat än min E-uppsats utan ert godkännande. Om det skulle finnas eventuella risker med deltagandet skulle det kunna vara att intervjun öppnar upp för reflektion kring tyngre frågor. Potentilla vinster kan å andra sidan vara reflektioner som leder till nya kunskaper och perspektiv på sin omgivning. Avslutningsvis kan nämnas att det finns möjlighet att ge godkännande för vidare användning av transkriptionen då den säkerligen kan tillföra vidare forskning inom området.

Om ni har frågor relaterade till denna studie så går det att kontakta mig eller min handledare genom kontaktpojkarna nedan:

Uppsatsskrivare, Emil Karlsson: tel. 073-032 32 97 mail. emilkarlsson910204@hotmail.com
Handledare, Hans Peter Hansen: mail. hans.hansen@slu.se