

# 1 Introduction

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## § 1.1 Background

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*Higher education is facing its greatest challenge ever in meeting its responsibility to provide the knowledge and educate citizenry that will lead to a thriving civil society... Higher education plays a unique and critical role, one often overlooked, in making a healthy, just and sustainable society and a stable climate a reality (ACUPCC, 2009).*

Higher education is in a constantly shifting state as it seeks to meet the educational needs of an evolving society. Recently, changes are occurring in higher education because of five primary factors (Comm, 2003):

- Higher public expectations over what universities should be delivering,
- Increasing parental concern about the quality of education,
- Greater emphasis on college ratings,
- Demographic changes in student population, and
- Higher costs.

There is a growing public expectation that universities should start focusing on delivering sustainability. This expectation is highlighted by the demands of new students entering the university. Students not only placed high value on many aspects of sustainability, but also expressed that sustainability concerns are a significant factor in students' university choices (Bone & Agombar, 2011).

This expectation was first formally identified over two decades ago by university presidents in the Talloires Declaration (1990) and has subsequently gained momentum with the Halifax Declaration (LPIID & Dalhousie University, 1991), the Earth Summit Agreements (UN, 1992) the Swansea Declaration (Association of Commonwealth Universities, 1993), the Association of European Universities (CRE) –Copernicus Charter (Association of European Universities, 1994), and the Luneburg Declaration (University of Lüneburg, 2001)—each of which emphasizes the roles and responsibilities of universities to promote sustainable development (Steinemann, 2003). These declarations are milestones in addressing the public's expectations over what universities should be delivering, but do not address the basic problem of offering guidance in order to assess a universities level of sustainability.

The underlying issue with assessing sustainability seems to be found within the term itself. Sustainability is an ambiguous and often controversial term that lacks a universally accepted definition. Sustainable development is generally defined as, “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environmental Development, 1987). This vague definition and its various interpretations provide a barrier to directly applying sustainability assessment in universities. Indeed, universities, teachers, students and the general public have formed their own interpretation of the term and Velazquez et al. (2006) argue that, ‘...each university should define its own concept of a sustainable university.’

Dalal-Clayton & Bass (2002) support Velazquez et al.’s view and, in fact, present three different approaches to assessing sustainability, which are generally based on either: accounts, narrative assessments or indicator-based assessment. These various approaches create suitability issues when trying to compare institutions level of sustainability. Different criteria for rating universities sustainability, different interpretation by universities as to what sustainability means and a self-reporting sustainability framework may lead to fluctuating and inconsistent ratings, which are important for future student’s decision making. Regardless of these inconsistencies, ratings and rankings are increasingly becoming mainstream educational criteria for future students.

Analysis of universities in terms of sustainability is still in an evolutionary stage, yet educational resources providers are already creating a ‘sustainability ranking’ for universities (The Princeton Review, 2011). These rankings are important to students (Bone & Agombar, 2011) and will spur changes in higher education (Comm, 2003), regardless of if these rating systems are scientifically correct, generally accepted or even appropriate for application in a higher education setting.

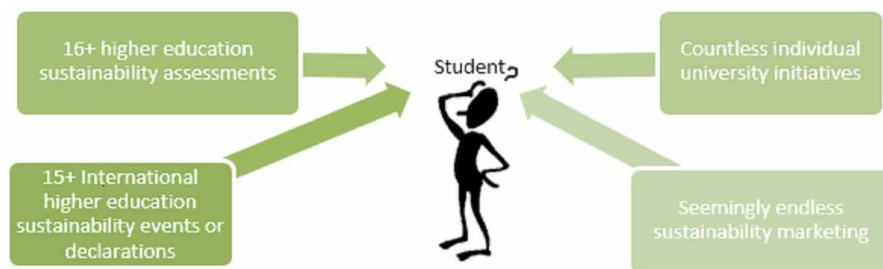


FIGURE 1.1 Higher education sustainability options to students

With a plethora of declarations, initiatives, marketing and assessments, there is a need to assess what the stakeholders want in order to make decisions regarding an institutions sustainability. Ultimately, students are the ones that are using the sustainability marketing materials to assist in their decision on which institution they will select to pursue their studies. The sheer volume of interpretations of the word sustainability with regards to higher education institution leaves ample room for potentially misguided initiatives or marketing.

Selby et. al. (2009) point out that there is already concerns/issues in higher education institutions sustainability marketing; including that it needs to be calibrated to actual sustainability performance while also embracing a sustainability vision. Without a common understanding of what sustainability is in a higher educational context, it will be hard for an institution and its stakeholders to have a common vision and understanding of sustainability, leading to inconsistent or inaccurate perceptions of marketing.

A universal system for assessing a higher educational institutions sustainability has not been translated into a measurable reality. A universal system would help create a common understanding of sustainability within higher education institutions and would help in stakeholder understanding, institutional accountability and impactful application of sustainable initiatives.

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## § 1.2 Research Framework

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### § 1.2.1 Problem Statement

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Sustainability in higher education is a growing concern for students but is hard to assess as there is a continuously increasing amount of declaration, tools, assessments, studies and marketing available for students to review.

## § 1.2.2 Background Hypothesis

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Summarizing the background information, it is assumed that a universal system is needed for assessing sustainability in higher education. By collecting what stakeholders need and utilizing the existing research, the following hypothesis can be identified:

- Students are fundamentally concerned with sustainability
- Current assessments are meeting stakeholder needs, but are not directly comparable
- Enough research exists so a framework can be created that allows stakeholders to compare different measurements of sustainability across multiple assessments

## § 1.2.3 Objective

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The objective of this thesis is to provide a holistic framework to aid students in reviewing sustainability tools, assessments and marketing. The framework will not replace or compete with any of the existing tools but rather provide a simple, yet robust, starting-point that students can modify based on their own needs and perceptions. The framework will be derived from a qualitative assessment of current methods and then modified based on the quantitative analysis of various surveys.

## § 1.2.4 Boundary condition

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The aim of this dissertation is to explore the value in creating a universal framework to aid students in reviewing sustainability tools and assessments. In order to accomplish this, one primary boundary conditions must be set to guide the research.

The boundary condition is understanding the limitations of the scope of each assessment. Each tool may vary in purpose, scope, function and state of development (Shriberg, 2002). They also vary in the weighing methods, flexibility and access to information (Gómez et al. 2015). Because of this, an assessment's scope will be considered sufficient for the assessments purpose. However, the breadth of the scope in relation to a holistic framework will be reviewed in order to aide stakeholders in understanding a more universal view.

## § 1.2.5 Research Questions

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The main research question is:

Can a holistic framework be created that will aid stakeholders in reviewing a universities level of sustainability?

The sub-research questions are:

- What are the features, trends, and needs in relation to sustainability in higher education?
- Is there a comprehensive framework to compare assessments? If not, could one be created through existing peer-reviewed literature?
- Do existing assessments cover the features, trends and needs of stakeholders in relation to sustainability in higher education?
- Should employability be considered a parameter of sustainability assessments within higher education?
- What is the importance of starting salary, under employment and over-education to higher education stakeholders?
- Can a test be conducted to validate why a student's post-graduation economic performance should be part of a higher education institutions metric for sustainability?
- Can a test be conducted to validate that stakeholders want a universal sustainability assessment for higher education institutions?

To answer these questions, each chapter was broken down into research sub-questions, with the results driving the subsequent chapter's research questions. This methodological approach is outlined and summarized below:

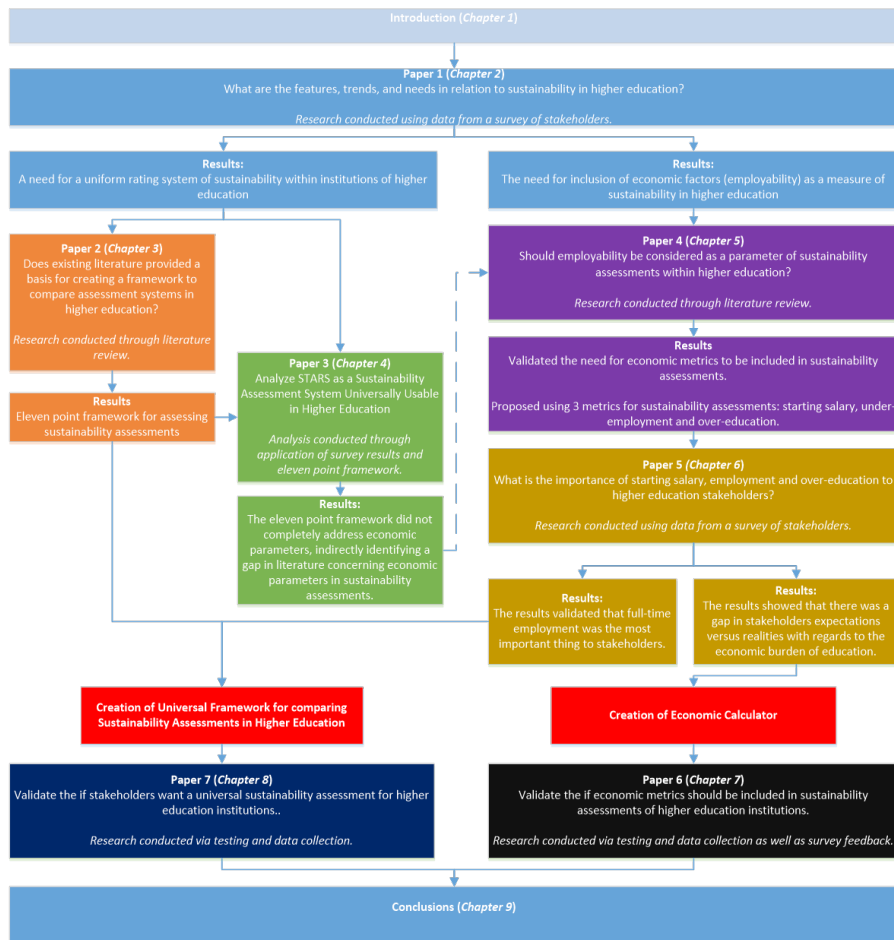


FIGURE 1.2 Research Overview

## 1 Paper 1 (Chapter 2)

The first question was to **identify features, trends, and needs in relation to sustainability in higher education** so as to guide the research of this dissertation. A survey was created utilizing international experts and literature and the empirical data was collected and analyzed to provide two meaningful results; namely that there was a need for a universal system and that there is a gap in current systems by not including the economic well-being of graduates.

## 2 Paper 2 (Chapter 3)

Seeing as the empirical evidence suggested that there was a need for a universal system, the next question was to **establish if a meaningful framework to compare assessment could be created via a literature review on assessments of sustainability system.**

An eleven-point system was created using existing peer reviewed literature on the subject and was used to perform a comparison of STARS and CSAF, two prominent sustainability assessment systems identified in the initial survey.

3 **Paper 3 (Chapter 4)**

The research focused on **analyzing the lapses of the STARS system identified by both the eleven-point framework and the data collected from the initial survey**. The results showed that the framework provided a useful tool for identifying and assessing lapses in STARS, but it was not a complete tool as it did not include the economic parameters needed by stakeholders.

4 **Paper 4 (Chapter 5)**

Considering that economic parameters were needed by stakeholders but did not exist in sustainability assessment literature, a broad spanning literature review was conducted to **determine if employability should be considered a parameter of sustainability assessments within higher education**. The review highlighted the importance of understanding the economic returns of higher education within the framework of sustainability assessment. It proposed three metrics for assessing the economic returns of education, namely starting salary, employment and over-education. These metrics are well understood within the general context of higher education, but are novel with regards to sustainability assessment.

5 **Paper 5 (Chapter 6)**

In order to test the conclusions of the literature review, a survey was conducted to **determine the importance of starting salary, under-employment and over-education to higher education stakeholders**. The results should that under-employment was the most important of the three metrics to stakeholders. It also identified a gap based on the perceptions of the economic burden of higher education and the post-graduate reality.

6 **Paper 6 (Chapter 7)**

**A test was conducted to validate why a student's post-graduation economic performance should be part of a higher education institutions metric for sustainability.**

Two sets of data were collected:

- a Stakeholders were asked directly: "Should a student's economic well-being be a measure of a higher education institutions sustainability?"
- b Data was collected via a customized economic calculator that captured stakeholder economic realities for before, during and after higher education in order to identify any unsustainable trends.

The results showed a strong desire by stakeholders for the inclusion of economic metrics in sustainability assessments in higher education. It also highlighted that the economic burden of higher education is unsustainable and would leave graduates in debt for decades to come.

7 **Paper 7 (Chapter 8)**

A test was conducted to **validate that stakeholders want a universal sustainability assessment for higher education institutions**. Stakeholders were given the ability to directly rate a variety of sustainability assessments using a modified framework from all the research conducted to date. The test, however, failed to deliver the expected results. The low amount of data collected only allowed for interpretations for the usefulness of the framework. Ultimately, it provides some anecdotal evidence as to why there may be no need for a universal sustainability assessment in higher education.

The dissertation follows this outline, with papers 1-7 presented in numerical order in chapters 2-8 with chapter 9 covering the conclusions and discussion.