MASTER THESIS

Course code: ORG5010   Candidate number: 1&2

ECOPRENEURSHIP AS AN OUTCOME OF UNIVERSITY STUDY OR AS A PRODUCT OF LEARNING BY DOING (PRACTICE) – CASE STUDY OF SELECTED ECOPRENEURIAL FIRMS

Date: 30-11-2023   Total number of pages: 96

MASTER OF SCIENCE IN GLOBAL MANAGEMENT

ERIC KOKU MAWUKO AGBO & ALBERT DUODU

NORD University

www.nord.no

ACKNOWLEDGEMENT

Our profound appreciation goes out to the following people and the institutions that have been instrumental in helping us complete this thesis.

We want to start by expressing our sincere gratitude to Professor Sujith Nair, our supervisor, for his help and support as well as his constructive feedback throughout the entire research process. His knowledge and support have been crucial in determining the course of this effort.

In addition, we would like to thank all the study participants, without whom this research could not have been done. The success of this project has been greatly attributed to their willingness to share their experiences and insights.

Finally, we would like to express our gratitude to Nord University for offering the tools and supportive learning environment we needed in order to complete this thesis.

TABLE OF CONTENTS

ABSTRACT

In light of the ever-intensifying environmental challenges, ecopreneurship has risen as a critical counter-response, marrying the principles of sustainable practices with the dynamism of entrepreneurial endeavours. Contemporary educational institutions have been swift to recognize and adapt to this burgeoning field, with many premier universities now offering specialized curricula centred on ecopreneurship. Yet, despite these academic advancements, a significant debate persists regarding the tangible applicability and impact of these programs in real-world entrepreneurial contexts. This apparent dichotomy between structured academic learning and real-world entrepreneurial triumph prompts a deeper introspection into the relative merits of formalized education versus hands-on experience in cultivating successful ecopreneurs. The study, therefore, seeks to understand the relationship between formal ecopreneurial education and learning by doing (practice) using selected ecopreneurial firms as case studies. The study applied the qualitative research approach. This study employed interviews as its primary method of data collection to address the research questions. Purposive sampling was used to select key representatives from select ecopreneurial firms with a track record of more than 2-3 years of operation. The results of the study revealed that the ecopreneurial landscape, driven by the rising environmental challenges and societal shifts towards sustainable practices, presents a multitude of factors that influence its evolution. The study findings also showed that despite the importance of formal education, there are ecopreneurs who manage to achieve remarkable successes without being deeply rooted in theoretical knowledge. The experiential component of learning, wherein hands-on experience amalgamates with abstract conceptualization, plays a pivotal role in this success, echoing Kolb's Experiential Learning Theory. Transcending the academic realm and venturing into practical ecopreneurial activities is not devoid of challenges. A palpable disconnect exists between academic sustainability teachings and the intricate, on-ground challenges that ecopreneurs face. This disparity becomes particularly evident when ecopreneurs, equipped with global sustainability standards, grapple with localized, region-specific challenges. It is recommended that (1) universities should review and potentially restructure their ecopreneurial programs to ensure they align with current industry requirements; (2) universities should embrace Kolb's Experiential Learning Theory by fostering environments where students can apply theoretical knowledge in practical settings.

Keywords: Entrepreneurship, Ecopreneurship, Ecopreneurs, Circular economy, Sustainability, Sustainable Entrepreneurship, Sustainable Leadership.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Entrepreneurship is traditionally seen as a way to produce economic advantages. Yet, as the idea of sustainable development gains traction in today's global landscape, there is a growing consensus that entrepreneurship's focus should not be purely on wealth creation (Terán-Yépez et al., 2020). This shift has given rise to ecopreneurship, which has attracted notable attention over the past ten years (Terán-Yépez et al., 2020).

Over the past decade, there has been a noticeable surge in green start-ups or ecopreneurial firms (Bhatnagar et al., 2022; Colombelli & Quatraro, 2019; Lakhanpal et al., 2023). For example, in Europe, ecopreneurial firms accounted for around 15% of all early-stage entrepreneurial activity (Bosma et al., 2020). Several universities worldwide have incorporated sustainability and ecopreneurship modules into their business and entrepreneurship programs (Daub et al., 2020; Fichter et al., 2016; Pittaway et al., 2023).

Ecopreneurship, often referred to as ecological entrepreneurship, represents a unique blend of environmental stewardship and business innovation (Schaltegger & Wagner, 2011). At its core, ecopreneurship marries the foundational principles of sustainable practices—those that prioritize the environment—with the dynamism and forward-thinking ethos typical of entrepreneurial ventures (Cohen & Winn, 2007). Given the escalating environmental challenges confronting the world today, such as the daunting threats of climate change, rampant deforestation, and pervasive pollution, there is a pressing imperative for businesses to assume a more active, contributory role in environmental conservation (IPCC, 2014).

Ecopreneurship has been posited as a proactive response to these global challenges, emphasizing business solutions that strike a balance between economic profitability and environmental sustainability (Dean & McMullen, 2007). Such ventures not only contribute to mitigating ecological challenges but also demonstrate that profitability and sustainability are not mutually exclusive (Parrish, 2010). As this entrepreneurial paradigm continues to gain traction and prominence, a central inquiry surfaces: What foundational elements catalyze the

evolution of a thriving ecopreneur? Does the path to successful ecopreneurship hinge primarily on formal university education, rich with theoretical knowledge? Or, is it the experiential learning, cultivated through hands-on practice and real-world challenges, that truly shapes and defines an ecopreneur's journey (Lackéus, 2015)?

Modern university systems, reflecting the ever-evolving demands of the global business landscape, have made significant inroads in integrating specialized courses catering to sustainability and environmental management (Tiana et al., 2017). In the heart of these academic offerings lies ecopreneurship, an emergent discipline converging environmental mindfulness with entrepreneurial fervour (Schaltegger & Wagner, 2011). Such programmes, prevalent in leading institutions worldwide, are often touted as crucibles for nurturing future leaders (sustainable leadership) in the domain of sustainable business. Their curricula are meticulously designed to empower students with a robust knowledge base, foundational principles, and strategic tools indispensable for steering both profitable and ecologically conscious ventures (Stubbs & Cocklin, 2008).

These academic endeavours encompass a diverse range of subjects. For example, sustainable supply chain management, circular economy, delves into optimising business operations with minimal environmental footprints, promoting responsible sourcing, and ensuring ethical production practises (Seuring & Müller, 2008). Green marketing strategies, on the other hand, pivot around eco-friendly products and services, emphasizing their value proposition to environmentally conscious consumers and communicating the sustainable ethos of brands (Peattie, 2001). A hallmark of these programmes is perhaps their methodological approach. While theoretical frameworks provide conceptual clarity and depth (Fryer, 2016; Jones et al., 2005), a plethora of case studies imbues students with pragmatic insights into the successes and pitfalls of real-world sustainable ventures. Moreover, integrating real-world examples into the curriculum ensures that students are not just confined to theoretical postulations; they are rather continually engaged with contemporary challenges, innovative solutions, and the dynamic interplay between business imperatives and ecological stewardship (Wals & Jickling, 2002).

Despite the comprehensive nature of modern university programs focusing on sustainability and ecopreneurship, there remains a palpable skepticism regarding their practical relevance in the real world (Muff, 2013). Generally, there are three different categories in which to place entrepreneurship education (Hagebakken et al., 2021). Thus, for some, it is about teaching

students the entrepreneurial themes as a societal or economic concept. Secondly, its goal is to prepare students to become lucrative business owners. For others, it is learning by doing, thus education through practice or enterprise (Hagebakken et al., 2021).

While these curriculums are undoubtedly content-rich, offering a broad spectrum of theoretical knowledge and conceptual frameworks, a growing chorus of critics suggests that there is a discernible gap between academic teachings and the gritty realities of running an ecologically-conscious enterprise (Grayson & Hodges, 2004). A core contention is the purported inadequacy of these programmes in equipping students with the hands-on skills and acumen essential for navigating the multifaceted challenges intrinsic to business management (Rae, 2006). Launching and scaling a venture, especially one anchored in sustainability, often entails confronting unexpected obstacles, financial quandaries, regulatory intricacies, and market dynamics that may not be sufficiently represented or simulated in a classroom environment (Pfeffer & Fong, 2002).

Furthermore, the mutable and complex landscape of environmental issues accentuates the demand for specific competencies: adaptability to evolving ecological scenarios, resilience in academic frameworks tend to provide a foundational understanding, the real crucible for developing these traits often tend to lie in experiential learning, outside the four walls of a classroom. Tackling real-time challenges, learning from failures, iterating solutions, and leading teams in dynamic environments are experiences that many posit are quintessential for budding ecopreneurs, and these may not be fully nurtured within the confines of a purely academic setting (Kolb, 2014).

The essence of entrepreneurship often lies in navigating uncharted waters, making the "learning by doing" paradigm especially resonant for many within this domain (Rae, 2005). Several successful entrepreneurs vouch for this experiential model, underscoring that there's no substitute for the lessons drawn from direct encounters with the tumultuous and unpredictable terrain of business (Sarasvathy, 2009). Ecopreneurship, with its dual focus on profitability and sustainability, presents a unique set of challenges, making the argument for hands-on learning even more compelling. For instance, sourcing sustainable materials is not merely about finding eco-friendly alternatives. "It requires an in-depth exploration of supply chain complexities, grasping the environmental impact at every phase, collaborating with suppliers, and occasionally leading the way in developing greener methods or materials (Schaltegger & Wagner, 2011).

In the same vein, the legal framework for eco-friendly businesses is frequently a mosaic of regional, national, and global regulations, protocols, and benchmarks." Steering this requires not just academic knowledge but a hands-on understanding of how to ensure compliance, leverage incentives, and sometimes even lobby for change (Stubbs & Cocklin, 2008)). Moreover, the world of sustainable business is replete with stakeholders — from eco-conscious consumers to green investors and non-governmental organizations. Building and nurturing relationships with these entities demand a level of interpersonal skills, networking acumen, and genuine passion that is best cultivated in real-world interactions (Isaak, 2002).

The crux of the "learning by doing" philosophy hinges on the belief that some lessons — especially the nuanced, complex ones — are best learned in the field rather than in the classroom. While academic settings offer structured knowledge and foundational principles, the chaotic, ever-evolving world of entrepreneurship imparts lessons in resilience, adaptability, and innovation that are challenging to replicate in controlled environments (Kolb, 1984).

Some of the most successful ecopreneurs started their ventures without formal training in sustainability or environmental management (Singh & Panackal, 2015). Instead, they were driven by a passion for the environment, a vision for a sustainable future, and a willingness to learn on the job. Their experiences, mistakes, and successes shaped their journey, leading them to innovate and adapt in ways that a structured educational program might not have facilitated.

1.2 Problem Statement

In light of the ever-intensifying environmental challenges, ecopreneurship has risen as a critical counter-response, marrying the principles of sustainable practices with the dynamism of entrepreneurial endeavours (Schaltegger, 2002; Thurman & Halkias, 2017). This intersection of ecological consciousness and business innovation heralds a fresh generation of entrepreneurs. These individuals, aptly termed 'ecopreneurs', have become linchpins in spearheading a global transition towards sustainable business paradigms (Nicolopoulou et al., 2018). The increasing prominence of this sector has also ushered in several pressing inquiries, chief among them being the roots and development of an ecopreneur's expertise.

Contemporary educational institutions have been swift to recognize and adapt to this burgeoning field, with many premier universities now offering specialized curricula centred on ecopreneurship (Betáková et al., 2020; Yi, 2021). Yet, despite these academic advancements, a significant debate persists regarding the tangible applicability and impact of these programs

in real-world entrepreneurial contexts (Bosman & Fernhaber, 2019; Cooper et al., 2004; Lundqvist & Middleton, 2013; Morley & Jamil, 2021). Adding complexity to this discourse is the observation that a certain segment of successful ecopreneurs have carved their niche without the foundational support of formal academic training in the discipline (Gibbs, 2006).

This apparent dichotomy between structured academic learning and real-world entrepreneurial triumph prompts a deeper introspection into the relative merits of formalized education versus hands-on experience in cultivating successful ecopreneurs. As Cohen & Winn (2007) argue, the nuances of the entrepreneurial landscape, particularly in the realm of sustainability, might necessitate a blend of theoretical knowledge and experiential insights.

This ambiguity, if left unaddressed, presents consequential implications for multiple stakeholders. Educational institutions, poised at the forefront of knowledge dissemination, may need to re-evaluate and potentially recalibrate their curricular offerings (Lackéus, 2015). Aspiring ecopreneurs, on their part, seek clarity on the optimal pathways to achieve their entrepreneurial aspirations. Moreover, policymakers, entrusted with the task of crafting conducive entrepreneurial ecosystems, require empirical insights to guide their decisions, ensuring that policies align with fostering a sustainable entrepreneurial landscape (Crane et al., 2019).

Moreover, the body of research on entrepreneurship is vast and varied, often centring on the competencies, attributes, and antecedents of entrepreneurs (Shane & Venkataraman, 2000). Though many investigations have delved into the educational antecedents of these business trailblazers, a conspicuous gap exists when zeroing in on ecopreneurs—a unique breed of entrepreneurs deeply committed to sustainable and environmentally-conscious ventures (Schaltegger & Wagner, 2011).

While there is no shortage of case studies chronicling the triumphs and tribulations of ecopreneurial ventures, a more granular analysis is lacking: few studies compare the success trajectories of ecopreneurs with formal sustainability education against those who have gleaned their insights predominantly from hands-on experiences (Isaak, 2002). The study, therefore, sought to examine whether ecopreneurship is an outcome of university study or as a product of learning by doing (practice).

1.3 Objectives

The main objective of the study is to understand the relationship between formal ecopreneurial education and learning by doing (practice) using selected ecopreneurial firms as case studies.

1.4 Specific Objectives

The objectives of the study are to:

i.   Ascertain the factors that drive ecopreneurial study to practice.
ii.   Examine why some ecopreneurs have succeeded without theoretical based knowledge.
iii. Explore the conflicts/challenges that arise about ecopreneurs transcending the knowledge acquired in school to everyday entrepreneurial practice.
iv.   Investigate whether the study of ecopreneurship influences entrepreneurial drive.

1.5 Research Questions

The research questions underpinning the present study were as follows:

i.   What drives ecopreneurial study to practice?
ii.   Why have some ecopreneurs succeeded without theoretical based knowledge?
iii. What are the conflicts/challenges that arise about ecopreneurs transcending their knowledge acquired in school to everyday entrepreneurial practice?
iv.   Has the study of ecopreneurship influenced entrepreneurial drive?

1.6 Significance of the study

The study offers profound implications for the understanding of sustainable entrepreneurial origins and pathways. At its core, this study seeks to explore the age-old debate of education versus experience, but with a twist that is deeply rooted in the current ecological and economic climate. To start, the research could act as a compass for academic institutions, pointing out whether their curricula are indeed seeding the minds of future ecopreneurs. If the findings of the study indicate that universities play a pivotal role in nurturing eco-conscious business leaders, then there is an impetus for educational reform, emphasizing sustainability in business courses.

Beyond academia, this study casts a spotlight on the entrepreneurial journey itself. By differentiating between formal education and hands-on experience, it provides a roadmap for budding entrepreneurs. The knowledge of which path – academia or practice – has bred successful ecopreneurs can help those at the start of their journey make informed decisions.

On a broader scale, the research touches the heart of modern economic and ecological concerns. In a world grappling with environmental challenges, fostering ecopreneurship is not just a trend but also a necessity. Governments, Non-Governmental Organisations (NGOs), and business incubators could use the findings as a foundation for strategies that promote businesses with an ecological conscience.

Moreover, the study is a testament to the global shift towards sustainable business models. Highlighting the stories of thriving ecopreneurial firms can act as a beacon, inspiring other enterprises to either adapt to eco-friendly practices or build new ventures with sustainability at their core. In terms of policy implications, the study could be a cornerstone. Imagine governments designing policies that resonate with the actual needs of ecopreneurs or designing incentives rooted in empirical evidence of what truly drives sustainable entrepreneurship. This research could be the key to unlocking such potential.

In sum, this study, though centred on the origins of ecopreneurship, resonates with larger themes of education, business practices, ecological responsibility, and policymaking. Its findings, while specific to ecopreneurial ventures, could ripple out, influencing and guiding a myriad of stakeholders in their pursuits for a sustainable future.

1.7 Delimitation of the Study

The scope of the study is confined to ecopreneurial firms. Hence, the findings of the study may not necessarily be applicable to non-ecopreneurial firms. Topically, the study is limited to the debate comparing the influence of formal university education versus experiential learning (learning by doing) on the development of ecopreneurship.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter of the study reviews literature cardinal to the study. It is divided into three broad sections namely, theoretical review (Section 2.2), conceptual review (Section 2.3), and empirical review (Section 2.4).

The theoretical review section discusses the theoretical underpinnings of the study vis-à-vis human capital theory (section 2.2.1), and experiential learning theory (section 2.2.2). The conceptual review section was subdivided into six touching on themes such as sustainable development and entrepreneurship, ecopreneurship and ecopreneurs, translating academic learning to practical engagement in ecopreneurship, drivers behind the practice of ecopreneurship, gap between theory and practice in entrepreneurship, challenges associated with transcending ecopreneurial knowledge acquired in school to everyday entrepreneurial practice, and the design of a conceptual framework. The last part of the chapter presented an empirical review of studies relating to ecopreneurship.

2.2 Theoretical Review

In research, a theoretical framework serves as a structured foundation that links and contextualizes key concepts and theories, providing a guiding scaffold for the study (Varpio et al., 2020). It is the responsibility of the researcher to define the pertinent theories and concepts that will underpin the study. These elements are then logically interconnected to create a cohesive framework that is directly applicable to the research being conducted. This framework serves as the intellectual architecture for the study, helping to focus the research questions and methodologies, while also offering a lens through which the findings can be interpreted (Varpio et al., 2020).

In that vein, human capital theory, and experiential learning theory shall form the basis of the theoretical lens through which the findings of the present shall be interpreted. These theories were selected because of their applicability to the various research questions. Each of these theoretical frameworks is treated in detail in the subsequent subsections.

2.2.1 Human Capital Theory

Human capital theory, which focuses on the importance of investments in human skills and knowledge for improving productivity and economic outcomes, originated in the field of economics (Becker, 2009; Gruzina et al., 2021; Sodirjonov, 2020). The theory gained prominence through the contributions of key proponents such as Theodore Schultz, Gary Becker, and Jacob Mincer. Even Adam Smith, in his seminal work, laid early foundations for the importance of human skills for economic prosperity (Becker, 2009; Kuzminov et al., 2019; Mellander & Florida, 2021; Osiobe, 2019).

The core assumptions of human capital theory encompass several critical aspects. First, investments in education and training are essential for improving productivity and earnings (Becker, 2009; Kuzminov et al., 2019; Leoni, 2023; Osiobe, 2019). Second, such investments are expected to yield a rate of return through increased earnings and better job opportunities (Angrist et al., 2021). The theory also posits that skills and knowledge are generally transferable between job contexts, contributing to their value (Basilio et al., 2017). However, like physical assets, human capital can depreciate over time if not adequately maintained through ongoing education and training (Kim & Park, 2020). Furthermore, the theory emphasises the vital role of human capital in contributing to broader economic growth (Osiobe, 2019).

When it comes to the strengths of the human capital theory, its influence is felt well beyond economics, being applicable across various disciplines (Vladimirovna et al., 2020). The theory provides foundational policy guidance in the areas of education and workforce development (Sule & Ntawigaya, 2021; Vladimirovna et al., 2020). Moreover, it places a strong emphasis on the critical nature of skill development in enhancing economic productivity (Mincer, 1958). One of the benefits of the theory is that it often allows for the quantification of investments in human capital, making it easier to evaluate outcomes (Kim & Park, 2020).

However, the theory is not without its weaknesses. For one, it tends to overly focus on economic outcomes, often ignoring other significant factors such as social, emotional, and psychological well-being (Marginson, 2019). It may sometimes even justify economic inequalities, as differences in income and opportunities are viewed as a result of differing investments in human capital (Marginson, 2019). Furthermore, measuring human capital is not always straightforward, and the theory frequently overlooks systemic and structural barriers that can impede individual investments in human capital (Mincer, 1958; Becker, 1964).

The relevance of Human Capital Theory to ecopreneurship is noteworthy. It supports the value of investing in university education or practical training as essential pathways for developing the skills required in ecopreneurship (Angrist et al., 2021; Beijer et al., 2021). Such investments are expected to provide social and economic returns by contributing to sustainable development (Chankseliani & McCowan, 2021). Furthermore, a high level of human capital fosters innovation and adaptability, traits crucial for ecopreneurial ventures aiming to address environmental challenges (El Arhlabi, 2021). The theory also offers a guideline for educational institutions and policymakers to allocate resources effectively in nurturing the necessary skills for ecopreneurship (Hooley, 2021).

Applying the human capital theory to the study's research questions, the theory was found to be particularly suitable for research questions (RQ) 1, 3 and 4. Human capital theory can aid in the analysis of what motivates individuals to apply academic study in ecopreneurship to actual practice (RQ1). It can also be used to investigate whether university study enhances the "entrepreneurial drive" in individuals (RQ4). Furthermore, human capital theory can also be used to identify the gaps or challenges in translating academic knowledge into practical applications (RQ3).

2.2.2 Experiential Learning Theory

According to seminal works by scholars such as John Dewey, Kurt Lewin, and particularly David Kolb, experiential learning theory (ELT) contends that the acquisition of knowledge is an intricate amalgamation of experience, perception, cognition, and behavior (D. A. Kolb, 2014). Kolb, who is widely recognized for his development of the Learning Cycle and Learning Styles Inventory, builds upon the foundational principles laid out by antecedent thinkers like Dewey and Lewin (Kolb, 2014; Sanchez, 2022). This theory operates on several pivotal assumptions, primarily that learning is initiated through concrete experiences, which are subsequently deconstructed and understood via reflective observation (Cărăuşan, 2020). Kolb delineates a cyclical process comprising four different stages: concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 2014).

ELT boasts numerous advantages, not the least of which is its exceptional versatility across various educational, professional, and practical domains. Such adaptability is further enriched by its allowance for diverse learning styles, thus facilitating more tailored learning experiences (A. Kolb & Kolb, 2006; Lowe, 2021; McCarthy, 2010). Additionally, the theory is conducive to the cultivation of an extensive repertoire of both hard and soft skills, which exhibit high

transferability across differing contexts. Furthermore, the theory champions active engagement, thereby engendering a vibrant and efficacious learning environment.

However, ELT is not devoid of criticisms. Its pronounced focus on experiential learning may inadvertently marginalize traditional pedagogical approaches and foundational theoretical knowledge (Kolb & Kolb, 2017). Moreover, the framework's lack of universal applicability and specificity has led to scholarly critiques regarding its empirical substantiation, especially in relation to its categorization of learning styles. Operationalizing this theoretical construct can also be resource-intensive, requiring meticulous planning and execution (Bolan, 2003).

In the realm of ecopreneurship, the pertinence of ELT is remarkably significant. The theory serves as an invaluable scaffold for nurturing indispensable ecopreneurial competencies such as problem-solving, creativity, and adaptability. It promotes a comprehensive grasp of the intricate nexus between environmental, social, and economic facets—crucial for ventures with a sustainability-centric ethos. The cyclical schema inherent to ELT also resonates with the iterative mechanisms prevalent in ecopreneurship, thereby expediting innovation and adaptability. In summary, the emphasis ELT places on experiential engagement and reflective practices proves indispensable in the conceptualization and refinement of sustainable business paradigms within the scope of ecopreneurship.

Applying the experiential learning theory to the study's research questions, this theory seems to find applicability in research questions 2 (RQ2) and 3 (RQ3). With regards to RQ2, experiential learning theory can be particularly useful in understanding why some ecopreneurs succeed without academic knowledge, focusing on how these individuals learn through 'doing' rather than formal education. Concerning RQ3, experiential learning theory will help in the exploration of the challenges that may arise when ecopreneurs try to apply academic knowledge in real-world settings, given that such knowledge may lack the experiential nuances.

2.3 Conceptual Review

2.3.1 Sustainable Development and Entrepreneurship

Various academic perspectives have explored the nexus between entrepreneurship and sustainable development, including domains like ecopreneurship, social entrepreneurship,

sustainable entrepreneurship, and indirectly, institutional entrepreneurship. In his seminal work, Joseph Schumpeter (1934) characterized entrepreneurial activities as acts of "creative destruction" (Schumpeter & Backhaus, 2003). Sustainable entrepreneurs exemplify this by dismantling traditional production techniques, products, market structures, and consumption behaviours, supplanting them with environmentally and socially superior alternatives. In essence, they drive the market evolution towards environmental and societal betterment.

Historically, literature on sustainability and entrepreneurship predominantly focused on ecopreneurship, an environmentally driven entrepreneurial approach (Aghion et al., 1999; Bennett, 1991; Blue, 1990; Lehmann et al., 2003; Piwowar-Sulej et al., 2021; Schaltegger, 2002). At the heart of ecopreneurship is the ambition to generate profit while addressing environmental challenges (refer to Table 1). In this paradigm, while economic objectives remain paramount, environmental goals are seamlessly integrated into the business's economic rationale.

Table 1: "Characterization of different kinds of sustainability-oriented entrepreneurship"

"Dimensions	Ecopreneurship	Social entrepreneurship	Institutional entrepreneurship	Sustainable entrepreneurship
Core motivation	Contribute to solving environmental problem and create economic value	Contribute to solving societal problem and create value for society	Contribute to changing regulatory, societal and market institutions	Contribute to solving societal and environmental problems through the realization of a successful business
Main goal	Earn money by solving environmental problems	Achieve societal goal and secure funding to achieve this	Changing institutions as direct goal	Creating sustainable development through entrepreneurial corporate activities
Role of economic goals	Ends	Means	Means or ends	Means and ends
Role of non-market goals	Environmental issues as integrated core element	Societal goals as ends	Changing institutions as core elements	Core element of integrated end to contribute to sustainable development
Organizational development challenge	From focus on environmental issues to integrating economic issues	From focus on societal issues to integrating economic issues	From changing institutions to integrating sustainability	From small contribution to large contribution to sustainable development"

Adopted from, Source: Schaltegger & Wagner (2011)

The entrepreneurial challenge then becomes twofold: to embed environmental achievements within the business's economic framework and to augment the number of eco-conscious businesses, regardless of their size (Hockerts & Wüstenhagen, 2010; Schaltegger & Wagner, 2011). Hence, the conviction that entrepreneurs are not ecologically conscious, or do not mind to be is rapidly becoming outmoded (Allen & Malin, 2008; Bawakyillenuo & Agbelie, 2021).

Numerous scholars have homed in specifically on social entrepreneurship (Brinckerhoff, 2000; Dacin et al., 2011; Daskalopoulou et al., 2023; Perrini, 2006). Central to the discourse on social entrepreneurship is the ambition to realize societal objectives and ensure sustainable financing, as reflected in Table 1. Often, the essence of social entrepreneurship revolves around offering exclusive benefits to community members or ensuring innovation access to marginalized market segments, especially evident in base-of-the-pyramid innovations in burgeoning markets and developing nations (Prahalad, 2004).

Additionally, the literature delves into in-depth case studies of successful non-profit social initiatives, such as Benetech (Desa & Kotha, 2006; Fruchterman, 2008; Vanderheiden, 2008). Within these academic discussions, social entrepreneurship is perceived variably: as a distinct ownership model, a philanthropic venture, a means of fundraising or a business driven by social purposes. Contrasting this, environmental entrepreneurship, or ecopreneurship, places a stronger emphasis on capitalizing on profitable entrepreneurial ventures with an ecological focus. The challenge in organizational evolution lies in weaving economic considerations intricately into the core objective of addressing societal challenges (Mair & Martí, 2006; Zahra et al., 2009).

Products, services, and organizational innovations may face challenges in achieving their desired outcomes if the market conditions are highly unfavourable (Schaltegger & Wagner, 2011). Consequently, for endeavours directed at sustainable development, it is imperative not only to acknowledge market factors but also to strive to influence them. This realization is evident in the literature on environmental entrepreneurship, and to a certain extent, social entrepreneurship. These fields highlight the role of corporations in moulding market conditions, reshaping regulations, and instigating societal change. This drive to alter institutional frameworks draws parallels to the domain of institutional entrepreneurship (as outlined in Table 1). Individuals pushing for transformations that either reshape existing institutions or pave the way for new ones are designated as institutional entrepreneurs (E.

W. Herrera, 2021). The efforts of these actors, who aim to enact institutional shifts despite inherent resistance, form the crux of institutional entrepreneurship discussions (Battilana et al., 2009; Grimm et al., 2023).

To fully capture the influence of entrepreneurial endeavours on sustainable development, a more modern concept known as sustainable entrepreneurship has evolved (Schaltegger & Wagner, 2011). This heightened entrepreneurial vision not only aims for the organization's sustainable evolution but also seeks to amplify its positive influence on the broader market and societal landscape, necessitating profound sustainability innovations.

Tracing the evolution of these academic threads prompts an inquiry: Are these entrepreneurial forms genuinely distinct, given their varied historical developments? While these strands have unique historical trajectories, their foundational motivations seem remarkably akin, suggesting a probable convergence of these presently discrete academic realms. As a result, ecopreneurship and sustainable entrepreneurship tend to be used interchangeably sometimes. Stubbs (2017) argues that sustainable entrepreneurship integrates various entrepreneurial types, such as social entrepreneurship and ecopreneurship, while also incorporating elements of corporate social responsibility.

2.3.2 Ecopreneurship and Ecopreneurs

In the face of pressing environmental challenges, ecopreneurs are leading the way towards more eco-friendly solutions (Belchior, 2023). With a growing emphasis on environmental consciousness and sustainable growth, entrepreneurs are launching ventures that address both ecological and societal issues. This form of entrepreneurship is called ecopreneurship. "Ecopreneurship" refers to entrepreneurship that is oriented towards ecological or environmental sustainability. It is a form of entrepreneurship where the business venture contributes directly to ecological and sustainable goals. Recognizing this trend, scholars are delving into various facets of green entrepreneurship, culminating in the study of ecopreneurship, aiming to foster sustainable practices and social accountability (Belchior, 2023). Practitioners of ecopreneurship are called ecopreneurs.

The term "ecopreneur" is derived from the amalgamation of "ecology" and "entrepreneur," signifying a novel cadre of business professionals who give precedence to environmental concerns and sustainability in their operational and strategic undertakings. Ecopreneurs, or

ecological entrepreneurs, are individuals who aim to generate economic value through ventures that are environmentally sustainable or contribute to environmental conservation. They integrate ecological considerations at the heart of their business practices in a variety of sectors such as renewable energy, waste management, green building, and sustainable agriculture, among others. The term "ecopreneur" reflects a blend of environmental and entrepreneurial ethos, indicating a business approach that prioritizes ecological stewardship alongside, or even above, profitability (Schaper, 2002). Ecopreneurs often work to innovate new technologies, processes, or business models that can help to reduce ecological degradation and promote sustainable practices within their industries (Cohen & Winn, 2007).

Ecopreneurs consistently place environmental concerns above financial gains when feasible, being deeply committed to minimizing their ecological footprint (Kirkwood & Walton, 2014). This approach not only presents a dual advantage for both the economy and the environment but also allows ecopreneurs to achieve their personal aspirations. By adopting sustainable practices within their businesses and through their offerings, ecopreneurs can champion environmental consciousness, educating a broad spectrum of consumers on the significance of environmental stewardship (Kirkwood & Walton, 2014).

Ecopreneurship or sustainable entrepreneurship emerged in the late 1970s and has since evolved (Soomro et al., 2020). Scholars like Blue (1990), Berle (1991), Bennett (1991), and several others are considered pioneers in the ecopreneurship domain, believing that entrepreneurs will spearhead the next industrial wave (Pacheco et al., 2010). Different terms such as green entrepreneurship, environmental entrepreneurship, and social entrepreneurship have been coined to describe this approach (Soomro et al., 2020).

Gibbs (2006) regards ecopreneurship as a combination of sustainable development and business practices. Tilley & Parrish (2006) believe ecopreneurs engage with all facets of sustainability: economic, environmental, and social. In an Indian study by Kundu & Rani (2016) younger respondents with a higher socio-economic status were more supportive of entrepreneurship. However, female MBA students exhibited a lower entrepreneurial inclination than other groups. Ecopreneurs differ from traditional ones in their commitment to effecting sustainable economic shifts via innovation (Prado et al., 2022). The rise of this entrepreneurial form indicates a global shift towards prioritizing the environment and social concerns (Soomro et al., 2020). Sustainable entrepreneurs also facilitate positive transformations and job growth, utilizing innovation (Farrinelli et al., 2011). Tilley & Young

(2006) view these ecopreneurs as agents of sustainable socio-economic change, resonating with Parrish & Foxon's (2006) findings.

2.3.3 Drivers Behind the Practice of Ecopreneurship

The venture into ecopreneurship is often sparked and fuelled by a complex interplay of intrinsic and extrinsic motivational factors. These factors play a pivotal role in not only initiating the ecopreneurial journey but also sustaining the momentum through the myriad challenges and opportunities that unfold in the realm of sustainable entrepreneurship (Dean & McMullen, 2007). Understanding the motivational dynamics is crucial as it provides insights into the drive behind ecopreneurial pursuits and the sustenance of ecopreneurial ventures over time.

Intrinsic motivation emanates from within the individual, often rooted in personal values, beliefs, and passions. It is the internal drive that propels ecopreneurs to venture beyond conventional entrepreneurial paradigms to explore sustainable and socially responsible business models (Nga & Shamuganathan, 2010). This form of motivation is often self-sustaining and is fuelled by the satisfaction and fulfilment derived from engaging in meaningful and impactful entrepreneurial activities.

On the other hand, extrinsic motivation is driven by external factors, often arising from the market environment, societal expectations, and regulatory frameworks. These external stimuli can significantly influence the decision-making and strategic orientations of ecopreneurs (York et al., 2013). Unlike intrinsic motivation, extrinsic motivation is often contingent on external rewards and recognitions, which can be either financial or non-financial in nature.

2.3.3.1 Intrinsic Motivation

Personal Values and Beliefs

The realm of ecopreneurship is often navigated by individuals whose intrinsic motivation is deeply anchored in their personal values and beliefs. The genesis of many ecopreneurial ventures can be traced back to a profound desire to engender positive environmental and societal transformations. The essence of such desires is often encapsulated in the personal ideologies of ecopreneurs concerning sustainability, ethical business conduct, and a pronounced sense of social responsibility (Nga & Shamuganathan, 2010).

The alignment between personal values and the overarching goals of the ecopreneurial venture acts as a potent fuel for the enduring motivation indispensable in traversing the multifaceted challenges endemic to sustainable entrepreneurship. This alignment transforms the venture from a mere business endeavour to a mission-driven pursuit, where the ecopreneur is not merely chasing financial gains but is striving to actualize a vision of a more sustainable and equitable world.

The role of personal values and beliefs extends beyond the initiation phase of the ecopreneurial venture. They serve as a moral compass, guiding decision-making processes, shaping organizational culture, and influencing stakeholder interactions. These values and beliefs are often reflected in the strategic choices, operational practices, and the overall organizational ethos of the ecopreneurial venture. For instance, an ecopreneur with a strong value orientation towards community well-being may prioritize local sourcing, fair trade practices, and community engagement as integral aspects of their business model.

Drawing upon insights, it can be posited that personal values and beliefs act as a pivotal anchor, bolstering resilience and perseverance amidst adversities. The journey of ecopreneurship is replete with inherent uncertainties, unforeseen setbacks, and external contingencies that may, at times, strain the foundational sustainability ethos of the enterprise. In such scenarios, it's the ingrained values and beliefs that provide the moral fortitude to stay the course and remain committed to the sustainability agenda even when faced with enticing, yet unsustainable, alternatives (Shepherd & Patzelt, 2011).

Moreover, the authenticity of motivation stemming from personal values and beliefs often resonates with a broader stakeholder base including customers, employees, and investors who are increasingly aligning their choices and resources with environmentally and socially responsible enterprises. This resonance not only enhances the legitimacy and trustworthiness of the ecopreneurial venture but also fosters a supportive ecosystem conducive for the venture's growth and impact.

Personal values and beliefs are not merely abstract notions but are instrumental in driving the actions, decisions, and persistence of ecopreneurs. They are the bedrock upon which the edifice of sustainable entrepreneurial motivation is built, rendering a distinctive character and purpose to the ecopreneurial venture.

Passion for Environmental Sustainability

The passion for environmental sustainability often serves as a profound intrinsic motivator, igniting the spark and fueling the ongoing journey of ecopreneurs. This passion is akin to a deeply ingrained calling that compels ecopreneurs to venture beyond traditional entrepreneurial realms, seeking innovative solutions to pressing environmental challenges. The intensity of this passion often correlates with the perceived environmental impact of their ventures, whereby more involvement and dedication are shown in proportion to the impact (Miller et al., 2012).

The manifestation of this passion is often visible right from the inception of the ecopreneurial venture. It's the driving force behind the willingness to explore uncharted territories, challenge the status quo, and envision sustainable alternatives. This passion transcends mere intellectual engagement and morphs into a visceral commitment to environmental stewardship. It propels ecopreneurs to not only identify and exploit market opportunities that align with environmental sustainability but also to persevere in the face of challenges and setbacks inherent in such ventures.

The sustenance of motivation over time, especially in the volatile and often uncertain terrain of sustainable entrepreneurship, hinges significantly on this ingrained passion. It's the resilience fostered by this passion that often carries ecopreneurs through adversities, be it financial constraints, market skepticism, or regulatory hurdles. When faced with tough choices, the unwavering passion for environmental sustainability serves as a moral and strategic compass, guiding ecopreneurs towards decisions that uphold the sustainability ethos of their ventures, even when easier, less sustainable options present themselves.

The passion or fervour for environmental sustainability elicits a profound resonance among a diverse array of stakeholders, encompassing consumers, employees, investors, and communities. Such resonance cultivates an indispensable trust and allegiance, pivotal for the triumph and influence of ecopreneurial endeavours. When stakeholders discern authentic passion towards environmental sustainability, they are more likely to support, engage with, and advocate for ecopreneurial enterprise (Cardon et al., 2009).

Contagiously, the nature of this passion also cultivates a culture of environmental consciousness and innovation within the organization, inspiring teams to align their efforts towards the shared vision of sustainability. Over time, this passion-infused culture becomes a defining hallmark of the ecopreneurial venture, attracting like-minded individuals and resources, thus creating a virtuous cycle of motivation, engagement, innovation, and impact.

2.3.3.2 Extrinsic Motivation

Market Opportunities

Extrinsic motivational elements are significantly influenced by the external milieu within which ecopreneurial ventures operate. Among these, market opportunities, especially those entwined with sustainable practices, hold a cardinal position in propelling ecopreneurs forward. The allure of venturing into emerging or underserved markets with sustainable products or services, and thereby fulfilling unmet needs, serves as a robust extrinsic motivator (Dean & McMullen, 2007).

The genesis of many ecopreneurial ventures can be traced back to the recognition of a market opportunity that aligns with environmental sustainability (Holt, 2011). When ecopreneurs perceive a demand for sustainable solutions, whether it is an innovative eco-friendly product, a service that reduces environmental impact, or a business model that integrates sustainability at its core, their motivation to venture into and exploit these market opportunities escalates. This dynamic is fuelled by the potential to achieve both economic viability and environmental impact, which are often viewed as mutually reinforcing objectives in the ecopreneurial context.

The validation of the ecopreneurial venture through positive market response significantly bolsters extrinsic motivation (Guleria & Kaur, 2022; Harte et al., 2020). When customers exhibit a willingness to pay for sustainable offerings, and when the market rewards the venture with growth and profitability, the extrinsic motivation is further reinforced (Hald & Olsen, 2010). This positive reinforcement not only validates the ecopreneur's efforts but also provides the financial sustenance necessary for the venture's survival, growth, and the amplification of its environmental impact.

Moreover, positive market response opens avenues for scaling the ecopreneurial venture, either through geographical expansion, diversification of sustainable offerings, or the development of new, innovative solutions (Rodríguez-García et al., 2019). The prospect of scaling, coupled with the potential for amplified environmental impact, further galvanizes the ecopreneur's motivation. Furthermore, the recognition and support from external stakeholders, such as investors, government bodies, or industry accolades, often serve as powerful extrinsic motivators. These outside endorsements not only offer the capital and credibility required for the enterprise's expansion but also embolden the ecopreneur's resolve to continue pursuing and expanding the sustainable agenda.

Policy and Regulatory Incentives

The realm of ecopreneurship significantly intersects with the policy and regulatory frameworks set forth by governmental bodies. These frameworks have the potential to either foster or impede the growth and impact of ecopreneurial ventures, thereby playing a crucial role in shaping the motivation and actions of ecopreneurs (York et al., 2013). Government policies, incentives, and regulations that favor sustainable business practices and eco-innovation emerge as substantial extrinsic motivators for ecopreneurs (Dhekra & Chen, 2022; Harte et al., 2020), encouraging them to initiate, sustain, and expand their ventures in alignment with environmental sustainability principles.

Drawing upon policy analyses, numerous governmental strategies, such as tax incentives, grants, and subsidies, serve as the foundational pillars for promoting environmentally conscious business methodologies (McFadden & Wells, 2016). These strategies not only alleviate the financial impediments commonly encountered by ecopreneurs but also diminish the obstacles to penetrating markets integral to environmental preservation. For instance, tax incentives for investments in renewable energy or grants for research and development in eco-innovation significantly diminish the financial burden on ecopreneurs, thus facilitating a conducive environment for their ventures (Dean & McMullen, 2007).

Moreover, these policy measures can tilt the competitive landscape in favour of ecopreneurial ventures (Potluri & Phani, 2020). When governments provide incentives for sustainable business practices, they inadvertently create a market scenario where ecopreneurial ventures gain a competitive advantage over traditional ventures that do not align with sustainability principles. This competitive advantage can manifest in various forms, including lower operational costs due to tax savings, increased customer loyalty due to alignment with societal values, or preferential treatment in governmental procurement processes favouring eco-friendly products and services.

Furthermore, favourable policy and regulatory frameworks serve as a testament to the societal and governmental commitment to environmental sustainability. They validate the ethos and mission of ecopreneurial ventures, thus providing not only extrinsic motivation in the form of financial incentives but also a sense of societal acknowledgment and support. This validation can significantly enhance the morale and motivation of ecopreneurs, reinforcing their resolve to continue their journey despite the challenges and hurdles they may encounter.

Additionally, a conducive policy and regulatory environment can stimulate a ripple effect within the broader entrepreneurial ecosystem. When governments take a proactive stance in promoting sustainable business practices, they send a strong signal to other stakeholders, including investors, customers, and other businesses, thereby fostering a culture of sustainability that transcends individual ventures.

In summation, policy and regulatory incentives act as pivotal extrinsic motivators that can significantly influence the trajectory and impact of ecopreneurial ventures. By lowering barriers to entry, providing a competitive advantage, and validating the mission of ecopreneurial ventures, these incentives play a vital role in promoting and sustaining ecopreneurial activities, thereby contributing to a more sustainable and environmentally responsible market economy.

2.3.4 Translating Academic Learning to Practical Engagement in Ecopreneurship

The transition from the controlled environment of academic learning to the unpredictable realm of entrepreneurial practice is a linchpin in nurturing ecopreneurial competencies and advancing a culture of sustainable entrepreneurship (Gibb, 2002). This transition embodies a multidimensional leap, transcending the conventional boundaries of classroom learning, and plunging into the complex, dynamic, and often unpredictable realm of entrepreneurial practise. The term "multidimensional leap" encapsulates the breadth and depth of this transition. It is not just about applying theoretical knowledge, but also about cultivating critical thinking, problem-solving, resilience, and creativity, which are indispensable in navigating the challenging terrain of ecopreneurship (Elshof, 2014; Pittaway & Cope, 2007). This leap propels aspiring ecopreneurs from the theoretical and often abstract realm of academia into a domain where theory melds with reality, where ideas are put to the test, and where solutions to real-world environmental challenges are envisioned and executed.

Academic environments provide a foundational understanding, a platform from which individuals can explore the principles of sustainability, the mechanics of entrepreneurship, and the fusion of both in ecopreneurship. However, the real essence of learning and understanding blooms in the field, where unpredictable challenges present opportunities for innovation, adaptation, and growth (Neck & Greene, 2011). It is in this complex, dynamic setting that the nuances of ecopreneurial practice unfold, often in ways that are not fully encapsulated in theoretical models. Moreover, this transition from academic learning to practical engagement

embodies a process of personal and professional evolution. As aspiring ecopreneurs step into the practical realm, they encounter a myriad of experiences that often reshape their understanding, strategies, and even their ecopreneurial aspirations. The feedback from the market, the community, and the environment contribute to an iterative process of learning, adjusting, and evolving (Rae, 2006; Wellsandt et al., 2018). This experiential learning, coupled with academic grounding, creates a rich tapestry of insights instrumental in developing robust ecopreneurial competencies and in propelling the sustainable entrepreneurship culture forward.

The unpredictable nature of entrepreneurial practice often serves as a crucible for innovation. Faced with real-world challenges, ecopreneurs are compelled to think creatively, adapt swiftly, and devise solutions that are both sustainable and economically viable (Corbett, 2005; Kennedy & Rood, 2017; Pecorari & Lima, 2020; Sarkar & Pansera, 2017; Shrivastava, 2014). Kennedy (2017) emphasized the need for sustainable business models that address social and ecological challenges. Shrivastava (2014) highlighted the importance of integrating creativity and sustainability to respond to economic, environmental, and social concerns. Sarkar (2017) focused on grassroots ecopreneurs who combine social and environmental goals to create economic value. Pecorari (2020) discussed the concept of eco-innovation, which requires financially viable solutions aligned with business performance and motivated by knowledge about the company and available resources. Overall, these studies underscore the necessity for ecopreneurs to navigate real-world challenges by employing creative thinking, swift adaptation, and sustainable solutions.

This dynamism inherent in the transition from academic learning to practical engagement enriches the ecopreneurial journey, making it a profound learning experience that extends beyond the classroom, into the heart of communities and the broader ecosystem. Academic institutions act as significant catalysts in the nurturing of ecopreneurial mindsets, serving as incubators where the initial seeds of ecopreneurial thinking are sown and nurtured (Schmitz et al., 2019). The ambiance of academia provides a fertile ground rich with the essential nutrients of knowledge, critical analytical thinking, and ethical frameworks that are crucial for the germination and growth of ecopreneurial individuals. Through structured curricula, aspiring ecopreneurs are introduced to a wealth of theoretical frameworks, models, and empirical insights that lay a solid foundation for a deeper understanding of the broader socio-economic and environmental contexts within which ecopreneurship operates. The academic journey in ecopreneurship does not just stop at imparting knowledge; it endeavours to cultivate a culture of inquiry, exploration, and critical analysis. The rigours of academic pursuits challenge and

stimulate the intellectual faculties of aspiring ecopreneurs, preparing them to engage with the complexities and challenges that characterize the ecopreneurial landscape.

In addition, the interdisciplinary nature of ecopreneurship education plays a pivotal role in fostering a holistic understanding of the multifaceted challenges and opportunities inherent in ecopreneurship (Sasongko & Anggadwita, 2016). By bridging disciplines such as environmental science, business management, economics, and social sciences, ecopreneurship education facilitates a cross-pollination of ideas, approaches, and perspectives. This interdisciplinary engagement enriches the learning experience, enabling aspiring ecopreneurs to appreciate the interconnectedness and interdependence of social, economic, and environmental systems. It equips them with a broader lens through which they can envision and evaluate the impact and implications of entrepreneurial ventures on a wider scale. Furthermore, the interdisciplinary discourse afforded by ecopreneurship encourages a collaborative learning environment, promoting dialogue, debate, and cooperation among students from diverse academic backgrounds. This collaborative ethos is reflective of the collaborative spirit essential in the ecopreneurial domain, where cross-sectoral partnerships and multi-stakeholder engagements are often key to developing and implementing sustainable business solutions (Colaner et al., 2018).

Additionally, the ethical considerations embedded in the university curriculum perform an important function in shaping the moral compass of aspiring ecopreneurs (Dauer et al., 2011). Dauer (2011) argued that integrating ethical concepts and moral reasoning into curricula is crucial for the success of environmental education, as it bridges the gap between knowledge and action. By engaging with ethical dilemmas and exploring the ethical dimensions of business decisions, students are better prepared to navigate the moral and ethical challenges that they may encounter in their ecopreneurial pursuits. However, the essence of ecopreneurship is in applying acquired knowledge to real-world challenges. Translating academic learning into practical engagement tests and refines ecopreneurial competencies. In this context, sustainability principles merge with entrepreneurial practices, leading to innovative, sustainable business solutions. Such hands-on engagement empowers ecopreneurs to drive a shift toward a more sustainable form of entrepreneurship (Shepherd & Patzelt, 2011).

In sum, there appears to be a symbiotic relationship between academic learning and practical engagement and this relationship has a way of enhancing the iterative learning process inherent in ecopreneurship. The feedback loop created through the continuous interplay between theory

and practice enriches both the ecopreneurial learning experience and the evolution of ecopreneurship as a field of study and practice.

2.3.5 Gap between Theory and Practice in Entrepreneurship

The realm of entrepreneurship, especially for ecopreneurs, often grapples with a distinct gap between academic theories and real-world practices. This disparity emerges from the dichotomy between the structured, idealized teachings of academic institutions and the unpredictable and fluid dynamics of real-world entrepreneurship. For many ecopreneurs, the realities of the business environment can starkly contrast with their academic learnings, leaving them overly reliant on textbook knowledge and potentially ill-prepared to navigate complex entrepreneurial challenges (Suparno et al., 2019).

The entrepreneurial journey is seldom linear. It is a path marked with unexpected twists, turns, and unforeseen challenges. A significant manifestation of the gap between theoretical knowledge and practical reality is the potential inability of ecopreneurs to pivot in the face of these novel situations (Agarwal et al., 2019). Pivoting, in entrepreneurial lingo, refers to a structured course correction designed to test a new fundamental hypothesis about the product, business model, or engine of growth. It's a strategy born out of the need to adapt to market realities, customer feedback, and other external dynamics. But when one's education is deeply rooted in set theories and established models, making such swift shifts can be daunting (Varii, 2023).

In the vast landscape of entrepreneurship, adaptability and innovation are not just valued; they're essential for survival (Hanifah et al., 2019; Strydom et al., 2021). Entrepreneurs, especially ecopreneurs, operate in sectors marked by rapid change (Brown & Proudlove, 2009), be it technological advancements, evolving customer preferences, or shifting regulatory environments. Their ability to nimbly adapt their strategies, products, or services in response to these changes often differentiates successful ventures from failed ones. Relying solely on academic knowledge can sometimes act as a straitjacket, limiting an entrepreneur's capacity to think outside the box and innovate in real-time. Another pivotal concern is the possible reluctance of ecopreneurs to embrace calculated risks. The world of entrepreneurship is inherently risky, with uncertainties lurking at every corner. While academic training can offer structured strategies and risk-mitigation models, real-world scenarios often present challenges that aren't covered in textbooks. A heavy reliance on academic perspectives might lead

ecopreneurs to lean towards conservative strategies, shying away from opportunities that, although risky, could lead to significant growth and innovation. This aversion to risk can stifle potential breakthroughs, preventing ventures from reaching their full potential.

Several factors contribute to this divergence between theory and practice. Firstly, academic curricula often do not keep pace with the rapidly evolving entrepreneurial landscape (Agarwal et al., 2019; Block et al., 2023; Carland & Carland, 2010; Eckhardt & Wetherbe, 2016). Moreover, these programs might have a broad focus, bypassing specialized knowledge areas vital to specific entrepreneurial ventures. Another significant contributor to the knowledge gap between practice and theory in entrepreneurship is the overemphasis on theoretical knowledge. Academic endeavours, rooted mainly in simulations, case studies, and theoretical discourse, can lead to a shortfall in hands-on, practical exposure. This lack of real-world experiences can deprive students of invaluable feedback and might instill a false sense of predictability (Agarwal et al., 2019). Consequently, when faced with the volatile nature of actual entrepreneurial endeavours, ecopreneurs might find their expectations misaligned and themselves vulnerable to unforeseen challenges.

Bridging this gap between practice and theory necessitates a multi-faceted approach. Integrative programs that blend theoretical insights with practical assignments can be instrumental. Arguably, the gap between theory and practice has a lot of bearing on the challenges ecopreneurs who seek to transcend their acquired ecopreneurial knowledge to everyday ecopreneurial practice.

2.3.6 Challenges Associated with Transcending Ecopreneurial Knowledge Acquired in School to Everyday Entrepreneurial Practice

Academia, with its controlled environment and focus on theoretical frameworks, often champions the importance of sustainability. Courses and lectures emphasize sustainability's vital role in shaping businesses of the future, presenting it as a central pillar of responsible entrepreneurship. Yet, what is taught in these controlled settings may not always capture the full spectrum of challenges faced in the field of sustainability, and for that matter ecopreneurship.

In the complex journey of ecopreneurship, multiple challenges arise when applying academic knowledge to real-world scenarios. These challenges can be grouped into distinct categories, namely cognitive, environmental, resource, and personal and psychological challenges. Each

distinct category offers a nuanced perspective on the interface between academia and entrepreneurship.

Cognitive Challenges

Firstly, cognitive challenges often manifest in the form of difficulties in translating theoretical concepts to real-world applications. Within the structured and controlled confines of an academic setting, ecopreneurs are introduced to problems and scenarios. However, in the vast and unpredictable expanse of the entrepreneurial world, these teachings sometimes fall short. Ecopreneurs face the Herculean task of moulding these theoretical insights to fit the ever-shifting terrains of their unique ventures. Furthermore, there is a tangible risk in over-relying on academic models (Agarwal et al., 2019). While these models offer methodical ways to approach problems, the real-world business landscape, with its intricate layers and unforeseen challenges, is not always adequately captured by them. Sole dependence on such models, without modifications suited to real-world challenges, can inadvertently steer ecopreneurs toward misjudgments.

Environmental Challenges

External environmental challenges such as regulatory and policy changes, market dynamics and consumer behavior pose another significant hurdle. Academic curricula, despite their comprehensive nature, might not always stay abreast with the swift currents of industry regulations and policies (Aly et al., 2021; Kozlinska, 2011). This lag can catch ecopreneurs off-guard, potentially ensnaring them in legal tangles or compliance discrepancies. Moreover, markets pulse with life, evolving constantly under the influences of technology, societal changes, and numerous other factors. While academic teachings paint a broad picture, the subtleties and capricious shifts in consumer behaviour often demand of ecopreneurs a level of adaptability that goes beyond classroom lessons.

Resource Challenges

The notion of sustainability, while noble and crucial, can demand a significant investment of resources when put into practice. Financial constraints often top the list of challenges (Sica, 2016). While academia might highlight the long-term benefits of sustainable practices, the immediate costs of implementing these strategies can be daunting for startups or small businesses. High upfront costs of sustainable technologies, the expense involved in acquiring

eco-friendly raw materials, or the financial implications of shifting to cleaner energy sources can strain the limited budgets of budding ecopreneurs.

Beyond monetary challenges, there is also the hurdle of technical expertise. Sustainable practices often involve cutting-edge technologies or specialized methodologies. Without the right technical knowledge, ecopreneurs might find themselves navigating unfamiliar terrains, struggling to implement practices they learned in theory. For instance, while a course might teach the benefits of solar energy, the practicalities of installing and maintaining solar panels, grid integration, and understanding energy storage might necessitate specialized skills not covered in typical curricula. Then there is the challenge of infrastructure. In many regions, especially in developing countries, the infrastructural support needed to adopt sustainable practices might be lacking (Damayanti et al., 2021). This could range from inadequate waste management facilities for a recycling initiative to a lack of charging stations for electric vehicles. Such infrastructural gaps can make the shift to eco-friendly practices more complex and prolonged.

Societal and Cultural Challenges

Societal and cultural expectations add another layer to this complex tapestry. Entrepreneurship, more so ecopreneurship, is perceived through diverse lenses across the world. What resonates in one classroom might clash with societal expectations elsewhere. Cultural nuances, which influence everything from negotiation techniques to leadership styles, further demand that ecopreneurs adapt their academic knowledge to fit varied contexts (Gunawan et al., 2020). For example, Gunawan et al. (2020) observed that in collectivist Asian cultures, entrepreneurial motivations tend to be more community-centric rather than individual-centred, suggesting that community-centric ecopreneurial projects are less likely to face stiff societal and cultural challenges compared to those that are individual-centred.

Personal and Psychological Challenges

Lastly, the path of entrepreneurship is not just a physical or intellectual journey but a deeply emotional one (Cardon et al., 2005; Karimi, 2020; Wolfe & Shepherd, 2015). The weight of uncertainties can amplify personal and psychological challenges. The absence of clear success metrics, unlike in academia, can lead to amplified fears of failure. Even with their academic laurels, some ecopreneurs might face the debilitating grip of imposter syndrome, questioning their own worth and authenticity. Other personal barriers, like burnout, struggles in maintaining

work-life harmony, or an aversion to continuous learning, might further hamper their entrepreneurial zeal (McDowell et al., 2019).

In essence, while the academic world does a commendable job of underlining the importance of sustainable and eco-friendly practices, the practicalities of bringing these concepts to fruition can be layered and intricate. Recognizing and navigating these challenges requires not just knowledge, but adaptability, persistence, and sometimes, a dash of ingenuity.

2.3.7 Conceptual Framework

The figure below depicts the conceptual framework underpinning the present study.
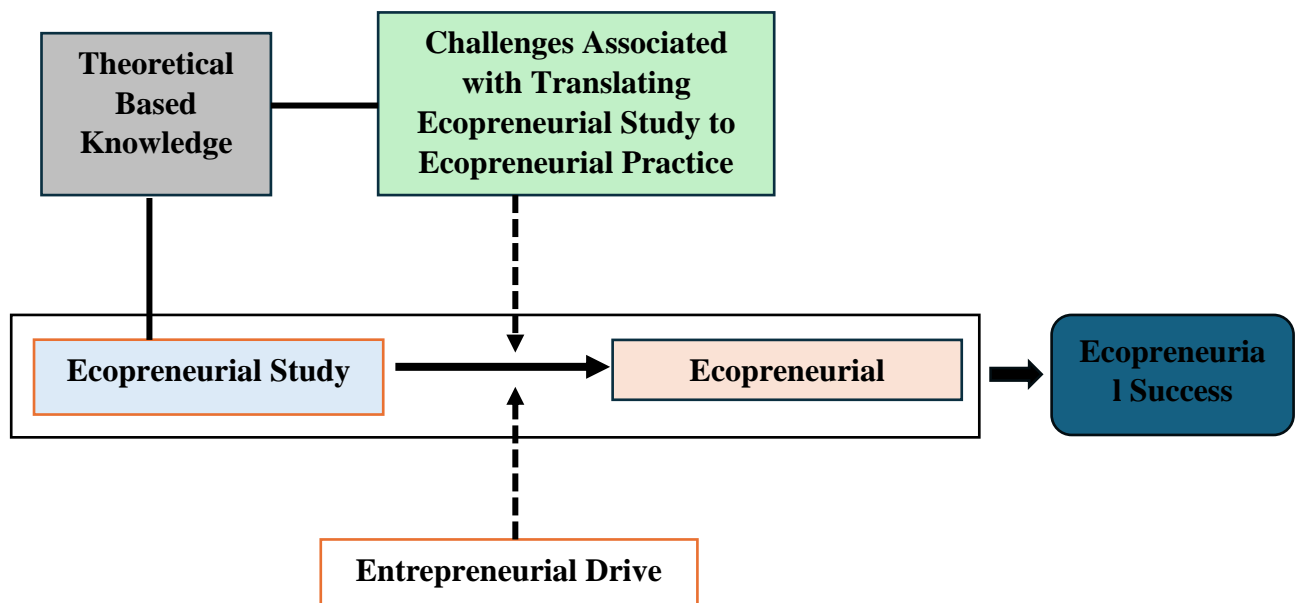
Figure 1: Conceptual Framework (Authors' Construct)

The conceptual framework is made up of six building blocks. These blocks are (1) theoretical based knowledge, (2) Challenges Associated with Translating Ecopreneurial Study to Ecopreneurial Practice, (3) Ecopreneurial study, (4) Ecopreneurial practice, (5) Entrepreneurial drive, and (6) Ecopreneurial success. Block 1 is connected to both Blocks 2 and 3 by lines. Block 3 is connected to Block 4 by an arrow that leads from Block 3 to Block 4. Block 3 and Block 4 are both inside a rectangle. An arrow from the rectangle containing Blocks 3 and 4 points to Block 6. Block 2 and Block 5 each have an arrow pointing at the arrow connecting Blocks 3 and 4. The arrows and lines between blocks represent the causal or correlational

relationships between these components. Subsequent paragraphs in this section describes the components of the conceptual framework, and how each component is interrelated with the other.

In accordance with the above conceptual framework, the following components and their interrelations are delineated:

Components

Theoretical Based Knowledge: constitutes the formal educational and academic foundation germane to ecopreneurship, inclusive of higher-education degrees, digital courses, and specialized seminars.

Challenges Associated with Translating Ecopreneurial Study to Ecopreneurial Practice: encompasses the inherent impediments and hindrances encountered when endeavouring to transpose theoretical acumen into practical applications.

Ecopreneurial Study: denotes specialized educational and training curricula expressly designed to cultivate ecopreneurial competencies and expertise.

Ecopreneurial Practice: represents the pragmatic application of acquired skills and knowledge in the initiation and management of an ecopreneurial enterprise.

Entrepreneurial Drive: epitomizes the motivational, aspirational, and psychological elements propelling an individual toward ecopreneurship.

Ecopreneurial Success: pertains to the successful establishment and operation of an ecopreneurial venture, gauged via key performance indicators such as profitability, sustainability, and societal impact.

Intercomponent Relationships:

A nexus between Theoretical Based Knowledge, Ecopreneurial Study, and Challenges Associated with Translating Ecopreneurial Study to Ecopreneurial Practice underlines the foundational role that theoretical knowledge play in both sector-specific learning and the complexities of its practical implementation.

A directional vector (i.e., arrow) from Ecopreneurial Study block to Ecopreneurial Practice block (Figure 1) elucidates that academic pursuits in this domain are intended to directly facilitate real-world applications.

Ecopreneurial Study and Ecopreneurial Practice to Ecopreneurial Success: Both Ecopreneurial Study and Ecopreneurial Practice are subsumed within a rectilinear figure, implying their collective contribution to the overarching goal of Ecopreneurial Success. An ensuing arrow to Ecopreneurial Success reveals the causative connection.

Arrows emanating from the blocks, "Challenges Associated with Translating Ecopreneurial Study to Ecopreneurial Practice" and "Entrepreneurial Drive" towards the link connecting "Ecopreneurial Study" and "Ecopreneurial Practice" signify the dual influence of both obstacles and intrinsic motivation on the conversion of theoretical insights into practice.

By employing this conceptual framework, the investigation seeks to traverse the multifaceted conduits and determinants instrumental in achieving ecopreneurial success. This delivers an exhaustive vista on the efficacious paths to ecopreneurial accomplishment.

2.4 Empirical Review

Ecopreneurship, mostly called ecological entrepreneurship, has become an important area of interest in the realm of sustainable business. This unique entrepreneurial approach marries economic aspirations with environmental considerations. A deeper look into various recent studies reveals intricate details about the motivations, intentions, and actions associated with ecopreneurship across various cultural and demographic settings.

A study by Barba-Sánchez et al. in 2022 conducted at the University of Oviedo shed light on the importance of environmental awareness among university students in Spain. They found that students with a higher degree of environmental awareness were more inclined towards entrepreneurship (Barba-Sánchez et al., 2022). Notably, their attitude towards entrepreneurial behaviour and their perceived control over such behaviours played a pivotal role in their entrepreneurial intentions. Interestingly, social norms around entrepreneurship also acted as a bridge between students' environmental awareness and their attitudes towards starting a business. Essentially, if the social environment was more receptive to entrepreneurship, students with strong environmental convictions were more likely to entertain entrepreneurial pursuits.

Moving from Spain to the African continent, a study by Strydom et al. in 2021 focused on the ecopreneurial intentions of Generation Y students in South Africa. The research found an encouraging trend: the youth of South Africa, particularly those in universities, have a positive inclination towards ecopreneurship (Strydom et al., 2021). However, there seemed to be a gap

between their knowledge about the environment and their intentions to pursue ecopreneurship. While they were informed and concerned about environmental issues, this did not fully translate into a concrete desire to become ecopreneurs. This insight emphasizes the need for a more concerted effort, potentially through incubation programs or government incentives, to bridge the gap between environmental concern and entrepreneurial action.

Lastly, in the diverse cultural landscape of Indonesia, a study by Gunawan et al. in 2020 delved deep into the motivations of craft-based Small and Midsize Enterprises (SMEs). The researchers uncovered that motivations to adopt ecopreneurship were not merely economic or environmental but were deeply rooted in values like self-enhancement, conservation, and self-transcendence (Gunawan et al., 2020). Moreover, the entrepreneurs' identities, shaped by factors like gender, religion, and ethnicity, interplayed with these values, further influencing their motivations. This intersectionality of identity and values provides a richer understanding of ecopreneurship in the Indonesian context. It also hints at the need for policies that are both inclusive and reflective of local cultural nuances.

In sum, while the spirit of ecopreneurship seems universal, its manifestations are deeply contextual. From the academically inclined youth of Spain to the environmentally conscious youth of South Africa, to the value-driven craft entrepreneurs of Indonesia, each group offers unique insights. It is evident that to nurture ecopreneurship globally, there is the need to appreciate and respond to varied cultural, social, and individual nuances.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses literature relevant to ecopreneurship. Transitioning to the current chapter, the focus is on the research methodology utilized to meet the study's objectives. The remaining portions of the chapter are as follows: Section 3.2 introduced the research methodology. Section 3.3 expounded on the study's research design. Section 3.4 discussed the research philosophy. Section 3.5 addressed data collection method. Section 3.6: detailed the sample design and the sampling techniques implemented. Section 3.7 elaborated on data capturing, data editing, and data analysis. Section 3.8 described the limitations and sources. Lastly, Section 3.9 highlighted the ethical considerations of the study.

3.2 Research Methodology

Research methodology refers to the systematic approach employed in addressing a research problem, directing the researcher towards the most optimal methods for conducting the investigation. It offers a roadmap, allowing the researcher to navigate through the complexities of the research problem, and ensures that every decision taken is underpinned by logic (Rajasekar et al., 2013). Broadly, research approaches can be classified into three categories: qualitative, quantitative, and mixed methods.

According to the methodology delineated by the study, the qualitative approach was primarily employed. The underpinnings for this decision can be traced to the study's intent to comprehensively probe into individual viewpoints, intrinsic motivations, and the logic underpinning ecopreneurship, notably the transference of scholastic insights from academic institutions to practical engagements in ecopreneurship. Qualitative research inherently seeks to probe and uncover layers beneath a phenomenon, striving for a nuanced understanding (Malek, 2016). This is achieved through the analysis of qualitative data sources. The inclination towards this research approach was also influenced by the study's design, which was fundamentally exploratory. Such a design is tailored for scenarios where the primary intent is to unearth fresh insights or knowledge, as was the case in this study, which aimed to shed light on ecopreneurship as a derivative of formal university education or experiential learning.

3.3 Research Design

The research design forms the outline for a study, encompassing the decisions that delineate the overarching strategy of the investigation. It serves as a roadmap, guiding the approaches and processes for the collection and analysis of data, thereby ensuring that the data garnered aligns with the study's objectives (Burns & Bush, 2002). The research design equips the investigator with a clear direction regarding the type of data essential for the research. There are various classifications of research designs, including but not limited to explanatory, exploratory, descriptive, and cross-sectional designs (Creswell, 2014). Essentially, the research design forms the bridge connecting the study's methodology to its philosophical foundation (Creswell, 2014).

For the scope of this investigation, an exploratory research design was employed. As articulated by Saunders et al. (2015), exploratory designs serve as invaluable tools when the intent is to uncover new insights, engage in deep-diving investigations, and evaluate phenomena within varied contexts. The strength of an exploratory design lies in its capacity to shed light on topics where there's limited existing knowledge or to analyze a recognized phenomenon in a fresh environment, distinct from its original context.

3.4 Research Philosophy

The understanding that individuals perceive the world in diverse ways, and the core principles underpinning these perspectives, are encapsulated within the realm of philosophy (Mason, 2014). Essentially, philosophy concerns itself with beliefs regarding the workings of the world. Within the academic and research context, philosophy underscores the tenets of reality, knowledge, and existence. The conception of what is deemed as 'real' is closely tied to an individual's worldview. Given this interconnection, the manner in which new knowledge is created becomes paramount, as such creation is influenced by the originator's understanding of reality and their subsequent interactions within that reality (Mason, 2014). Recognizing the philosophical foundations guiding a researcher's knowledge-creation process can significantly enhance the independent validation of that researcher's study findings. This understanding sets the stage for the introduction of the term 'paradigm'.

A 'paradigm' embodies the distinct ways through which people interpret the world around them. Long (2007) posits that one's perception is largely shaped by their existing knowledge and thought patterns, which are informed by prior conceptual experiences. This is succinctly encapsulated in Long's assertion: 'what you see depends on what you look at, your previous visual/conceptual experience (the way you have been taught to think) and how you look.' On a similar note, Guerra et al. (2012) describe a paradigm as a methodological and conceptual framework that guides a scientist's operations. Thus, a paradigm acts as the interpretative lens offering a specific vantage point to the observer.

The significance of the paradigm is amplified within the research domain since it potentially influences the research's overall direction. However, the acknowledgment of research paradigms becomes a pivotal issue for researchers (Guerra et al., 2012), primarily due to its bearing on the interpretation of research outcomes. Every research paradigm encompasses three pivotal components: methodology, ontology, and epistemology (Guba & Lincoln, 1994). While ontology delves into the essence of 'reality', epistemology explores the researcher's engagement with that reality, and methodology concerns the strategies employed to discern that reality.

Diving into the realm of ecopreneurship, this study contends that the process of becoming an ecopreneur cannot be entirely encapsulated within the rigid frameworks of positivist traditions. Contrary to the positivist's objective reality, social constructivism allows for a subjective interpretation of ecopreneurial success, viewing it as a complex, multi-dimensional construct shaped by individual experiences and social interactions.

Given that ecopreneurship can emerge from the structured environment of university-led programs or from the organic, hands-on approach of learning by doing, it is imperative to adopt a research philosophy that accommodates the nuanced nature of these educational pathways. Social constructivism is particularly pertinent to this study as it recognizes that knowledge of ecopreneurship is not a fixed entity but a construction developed through social processes and individual learning experiences.

By utilizing a constructivist lens, this research will delve into the personal narratives and contextual factors that shape the ecopreneurial journey. It will investigate how academic curriculum and practical experiences lead to the conception and operationalization of sustainable business enterprises. Dialogic interactions will enhance rich, qualitative insights

into the values, motivations, and strategies that define ecopreneurial practice, while a focus on contextual insights will reveal how various educational and practical backgrounds influence ecopreneurial outcomes.

Furthermore, given that ecopreneurship is often characterized by innovative, localized solutions to environmental problems, the constructivist approach is well-suited to dissect these phenomena within the smaller, more focused samples that are typical of case studies. The in-depth exploration facilitated by constructivism is essential to identify the intricate patterns and meaning-based relationships within selected ecopreneurial firms, enabling the construction of a robust framework that reflects the complex reality of ecopreneurial learning processes (Merriam, 1998; Moustakas, 1994).

The research philosophy adopted here will, therefore, shape the research methodology, encouraging methods that are flexible, qualitative, and reflective of the participants' perspectives, thus ensuring that the study's findings are grounded in the lived experiences of ecopreneurs."

3.5 Data Collection Method

According to methodologies elucidated by numerous scholars (DeJonckheere & Vaughn, 2019; Nayak & Narayan, 2019; Sileyew, 2020), data collection techniques can be broadly classified into two distinct categories: secondary and primary data acquisition. Within the confines of this particular study, primary data acquisition was accorded significant emphasis and was predominantly facilitated via structured interviews. Prior to initiating the interview procedure, prospective informants were meticulously apprised of the study's objectives and overarching goals, guaranteeing the procurement of their informed consent to contribute to the research discourse. The mode of delivering the interview guides was tailored to the convenience of the informants. Depending on their preferences and availability, interview guides were disseminated either electronically via email or physically during face-to-face interactions.

3.5.1 Semi-Structured Interviews

This study employed interviews as its primary method of data collection to address the research questions using a qualitative approach. The chosen instrument for the interviews was an open-ended semi-structured format. A semi-structured interview diverges from a strictly formalized set of questions. As articulated by Adams (2015), a semi-structured interview combines the use of open-ended and closed-ended questions, often enhanced by subsequent 'why' or 'how' inquiries and is executed in a conversational manner with individual respondents. This format was selected as it permitted respondents the flexibility to articulate their thoughts in their own terms, while also addressing structured questions. The open-ended sections of the semi-structured interview aimed to unearth rich, qualitative insights related to the research question. Simultaneously, the closed-ended queries allowed exploration of the topic based on established knowledge.

The questions within the interview guide, detailed in Appendix 1, were structured to encapsulate the three primary objectives delineated for this research. The unstructured segments of the interview were crafted to facilitate unhindered expression of the respondents' views. Depending on respondents' preferences, the interview guide was either administered in person or sent via email in hardcopy format.

The following research questions served as the foundation for the design of the interview guide and the formulation of the research questions: (i)What drives ecopreneurial study to practice?; (ii) Why have some ecopreneurs succeeded without theoretical based knowledge?; (iii) What are the conflicts/challenges that arise about ecopreneurs transcending their knowledge acquired in school to everyday entrepreneurial practice?; (iv) Has the study of ecopreneurship influenced entrepreneurial drive?

3.6 Sample Design and Sampling Methods

The sample design serves as a framework determining which individuals will be included in a given sample. For this study, the overarching sample frame encompassed all stakeholders in the realm of ecopreneurship. The adopted sampling design was non-probabilistic. In such a design, selection is driven by the ease of accessibility to individuals or when researchers believe that those chosen are representative of the broader population under investigation (Kitchenham & Pfleeger, 2002).

Table 2: Profile of Key Informants

De-identified Interviewees	Country/Region	Sex	Marital status	Education level	Job position	Type of Ecopreneurial business
Key informant 1	Ghana	Female	Married	Bachelor's degree (Metal products design)	CEO	Accessories made from recycled glass
Key informant 2	Italy/Africa	Female	Married	Bachelor's degree	CEO	An association focused on environmental protection and women empowerment
Key informant 3	Ghana	Male	Married	Bachelor's degree	CEO	Creating innovative products from plastic waste
Key informant 4	Ghana	Male	Married	Bachelors degree	CEO	Social enterprise focused on finding sustainable alternatives to single use plastics.
Key informant 5	Ghana	Male	Single	Bachelors degree	CEO	Social enterprise

This investigation further leaned on purposive sampling to pinpoint key representatives from selected ecopreneurial firms with a track record of more than 2-3 years of operation. Purposive sampling zeroes in on individuals who embody characteristics deemed significant for the research in question (Abidin & Hariyono, 2020; Schneider, 2019). The sample comprised five central informants. These informants were individuals who consented to partake in the interview process, as delineated in Table 1. Questions posed to these participants were crafted

meticulously to solicit new insights and to garner their distinctive viewpoints on the research topic(s) at hand.

3.7 Data Capturing, Data Editing and Data Analysis

Interviews were one for this study, and informants gave their prior agreement and were audio recorded. These recordings were then converted into written format through a process called transcription. Transcription refers to the act of transforming spoken words, such as those from an interview recording, into a textual format (Halcomb & Davidson, 2006). Broadly, transcription can be approached in two main ways: verbatim and non-verbatim (Bucholtz, 2000; Oliver et al., 2005).

The former, verbatim transcription entails a thorough transcription of the exact words spoken and their delivery. It retains elements beyond just the spoken words, including non-verbal cues and the dynamics of the interaction between the interviewer and the interviewee (Oliver et al., 2005). On the other hand, non-verbatim transcription prioritizes the actual spoken words and streamlines the transcription by omitting repetitive patterns, hesitations, and non-verbal cues, resulting in a polished and concise representation of the conversation (Bucholtz, 2000; Oliver et al., 2005). In line with the study's requirements, the non-verbatim transcription method was chosen, ensuring the final transcription was polished, devoid of pauses and other speech peculiarities.

Given the study's exploratory nature, the analysis leaned towards a descriptive approach. The qualitative data harvested from the interviews underwent thematic analysis, employing thematic coding. (G. R. Gibbs, 2007) characterizes thematic coding, a facet of thematic analysis, as a foundational method in qualitative analysis. It is integral to multiple analytical frameworks and is centered on building "a framework of thematic ideas" (p. 38) around the data. This method aids in pinpointing central themes woven through the interviewees' responses. The qualitative data analysis software, ATLAS.ti, facilitated this analytical process.

In this study, the use of the interview guide allowed the key informants to freely express themselves. Their responses were then transcribed, edited, compiled, and analysed using ATLAS.ti, a qualitative data analysis program, to isolate common themes among the main informants' comments and observations. Table 2 shows the thematic analysis processes used

to guide the analysis of the qualitative data. The exploratory nature of the study necessitated this more descriptive approach to analysis.

Table 3: Thematic Analysis Processes

Processes	Descriptions
Transcription of the interviews	Prior to delving into the core of the analytical discourse, it was imperative to transcribe every interview, irrespective of whether it was documented via video or audio recording.
Familiarity with data	To ensure the precision and fidelity of our research outcomes, we engaged in a meticulous examination of the recorded material, subjecting it to repeated auditory and visual scrutiny.
Organising the data	Subsequent to the transcription process, the dataset underwent a systematic organization, facilitating the identification of emergent patterns.
Identifying themes	We initiated our analytical process by meticulously examining the amassed data, scrutinizing existing scholarly works, and identifying recurrent themes among the responses of our interviewees, with the aim of uncovering a comprehensive range of themes.
Reviewing the chosen themes	In light of the substantial quantity of themes initially identified, alongside the apparent lack of relevance of certain themes, there was a strategic impetus to reevaluate the preliminary selection. This critical reassessment facilitated a distillation process, effectively condensing the extensive array of themes down to a core set of pivotal themes, while the less pertinent themes were consequently discarded.

Selection of final theme	Upon conducting an exhaustive examination of both the empirical data and relevant literature, the study culminated in the identification of four cardinal themes namely drivers of ecopreneurial study to practise, success of ecopreneurs without theoretical based knowledge, challenges and conflicts in translating academic knowledge to practical entrepreneurship, and influence of ecopreneurship study on entrepreneurial drive.
Produce the report	The perspectives and responses of the informants regarding each identified theme are systematically arranged and presented in a chronological sequence. This meticulous organization facilitates a coherent narrative and ensures that the progression of ideas and viewpoints can be easily followed and understood.

3.8 Limitations and Sources of Error

In a study delineated by (Norris, 1997), it is posited that all forms of research are inherently vulnerable to a myriad of discrepancies. Specifically, for the study in question, plausible origins of inaccuracies encompass selection biases, the reliability of the data disseminated, and the conceivable interplay or reactivity between the researcher and the participants. Nevertheless, the existence of such potential discrepancies does not undermine the legitimacy of the study's conclusions.

Reliability and Validity

Validity and Reliability are two notions, foundational in quantitative research, pivot around two primary concerns: the replicability of results for reliability and the accuracy of measurement instruments for validity. However, these conventional notions face critique in qualitative research. For qualitative scholars, the quantitative definitions of these terms appear insufficient. Replicability, a cornerstone in quantitative approaches, is not the prime concern for qualitative researchers (Glesne & Peshkin, 1992). They lean towards parameters like

precision (Winter, 2000), credibility, and transferability (Hoepfl, 1997) to evaluate their findings, underscoring the paradigmatic differences between the two approaches.

This divergence extends to the role of the researcher. While quantitative researchers strive to maintain distance from their subject to ensure objectivity, qualitative counterparts acknowledge and, at times, champion their active role within the research process (Winter, 2000). (Patton, 2002) amplifies this sentiment, emphasizing the dynamic nature of the real world and the researcher's need to be immersed within these changes, chronicling events as they evolve.

Yet, regardless of these methodological distinctions, both paradigms place a premium on credibility. In quantitative studies, credibility hinges on the construction of the instrument. However, in the qualitative realm, Patton (2002) notes that "the researcher is the instrument" (p. 14). This perspective underscores that while quantitative researchers delineate between reliability and validity, qualitative scholars prefer terms that encapsulate both, such as trustworthiness, emphasizing the inseparability of these concepts in their domain.

Reliability

Reliability, while primarily associated with quantitative research, has implications across all research types. Essentially, it speaks to the quality of research. If qualitative research is viewed through the lens of information elicitation, then the measure of its quality is its ability to clarify otherwise ambiguous situations (Eisner, 1991). Qualitative research aims to generate understanding (Stenbacka, 2001) as opposed to the explanatory nature of quantitative research. This differentiation in objectives is the primary reason why many argue that the concept of reliability does not neatly fit into the qualitative paradigm. Stenbacka (2001) even suggests that using reliability as a yardstick for qualitative research might indicate that the research is flawed.

However, Patton (2002) asserts that any qualitative researcher must grapple with issues of reliability and validity during the research process. This perspective aligns with (Lincoln & Guba, 1985) query: how does one convince an audience of the merit of their research findings? (Healy & Perry, 2000) argue that each research paradigm should be assessed based on its intrinsic criteria. Whereas quantitative research prioritizes 'Reliability' and 'Validity', qualitative research focuses on 'Credibility', 'Neutrality', 'Consistency', and 'Applicability'

(Lincoln & Guba, 1985). Specifically, Lincoln and Guba (1985) equate the term 'dependability' in qualitative research to 'reliability' in quantitative studies. They underscore the utility of an 'inquiry audit' (p. 317) to establish the dependability of qualitative findings by examining both the research process and its outcomes for consistency (Hoepfl, 1997). Similarly, (Clont, 1992) and (Seale, 1999) link 'dependability' in qualitative studies to 'consistency' or 'reliability' in quantitative realms. For qualitative research to exhibit consistency, all steps of the research process must be verifiable through the examination of raw data, process notes, and data reduction products (Campbell, 1996).

The idea that trustworthiness in qualitative research forms the bedrock of validity and reliability. As emphasized by Seale (1999), the essence of a research report's trustworthiness inherently addresses traditional concerns around validity and reliability (p. 266). This perspective aligns with the conviction that qualitative research, by its very nature, requires unique criteria to judge its scientific rigour. (Strauss & Corbin, 1990) emphasize that conventional benchmarks of 'good science', designed primarily for quantitative paradigms, demand recontextualization to suit the nuances of qualitative investigations (p. 250).

However, there exists a contrasting viewpoint that challenges the application of reliability in qualitative paradigms. (Stenbacka, 2001) contends that the domain of reliability primarily revolves around measurement. Given that qualitative research is less about standardized measurements and more about nuanced interpretations, the yardstick of reliability may seem misplaced. She goes further to suggest that imposing reliability standards on qualitative research could potentially undermine its value, indicating that such a study might be inherently flawed (p. 552). This debate underscores the ongoing discourse in the research community about the most appropriate criteria to assess the rigour and integrity of qualitative studies.

Validity

In qualitative research, the construct of validity is multifaceted and is often described using an assortment of terminologies. This intricacy arises because validity is not universally defined within the realm of qualitative research but is inherently tied to the methodologies and intentions of specific research projects (Winter, 2000). While some qualitative scholars might argue against appropriating the term "validity" for qualitative work, there is a concurrent acknowledgment of the necessity for a measure or benchmark to ascertain the quality of

qualitative insights. As such, depending on researchers' paradigmatic inclinations and their interpretations of validity, a myriad of terms like "quality," "rigour," and "trustworthiness" have emerged (Lincoln & Guba, 1985; Seale, 1999; Stenbacka, 2001; Creswell & Miller, 2000).

Stenbacka (2001), while not discarding validity like she does with reliability for qualitative research, underscores the need for redefining validity within qualitative contexts. She perceives it as an essential criterion that qualitative research must meet to qualify as 'proper research' (p. 551). The discourse around rigour in research, as (Davies & Dodd, 2002) suggest, implies a certain degree of precision and meticulousness. However, they contend that its application in qualitative research should differ from its traditional application in quantitative paradigms, emphasizing the importance of subjectivity, reflexivity, and the dynamic of social interaction in interviews.

Lincoln & Guba (1985) further elucidate the concept by suggesting that trustworthiness encapsulates what is traditionally discussed as validity and reliability in the quantitative sphere. Instead of merely seeking objective 'truth', the emphasis shifts towards ensuring that research findings are trustworthy, defensible, and elicit confidence (Johnson, 1997). The overarching objective is to delineate between high-quality and subpar research. Hence, if terms like reliability, validity, trustworthiness, quality, and rigour serve as determinants of 'good' research, then enhancing and assessing these criteria becomes pivotal across all research paradigms.

In sum, qualitative research, unlike its quantitative counterpart, lacks standardized validity tests. The nature of the investigation often morphs based on the study itself (Winter, 2000). There might not always be a definitive hypothesis or concrete findings. Instead, the essence of 'validity' in such studies lies in the accurate representation of participants, the research's objectives, and the appropriateness of the methodologies employed.

Reliability and Validity Testing

In certifying the reliability and validity of this paper vis-à-vis the dependability, trustworthiness, credibility, neutrality, and applicability, the study drew upon and followed the protocol established by Owoseni & Twinomurinzi (2019) in their paper:

A. Evaluation of existing Human capital theory and experiential learning theory on which the study is grounded.

B. Design of research instrument based on the two theories (i.e., Human capital theory and Experiential learning theory), and qualitative research paradigm.

C. The assessment of the research plan by the university committee on ethics.

D. Applying the interview tool constantly.

E. Determining the background and prejudices of the researcher.

F. Reliable methods for coding and classifying.

G. Impartial examination of selected categories and codes.

3.9 Ethical Consideration

Hennink et al. (2011) delve deeper into these ethical tenets, which are vital for maintaining the trustworthiness and credibility of qualitative research. These considerations are discussed in more detail as follows:

Informed Consent: In our study, informed consent was more than just obtaining a signature; it involved a comprehensive briefing session where participants were thoroughly informed about the research's purpose, their role, potential risks, and the broader benefits of the outcomes. We ensured an ongoing conversation throughout the study, providing ample opportunities for participants to ask questions and receive further explanations. This process was documented through periodic check-ins and feedback forms, ensuring participants remained fully informed and consenting.

Self-determination: Participants ought to exercise full autonomy over their involvement in research. Under no circumstances should they feel coerced or unduly pressured into participation, responding to particular queries, or maintaining their involvement should they wish to withdraw. This tenet upholds the autonomy of participants, recognizing them as integral contributors to the co-construction of knowledge.

Minimization of Harm: Anticipating potential harms, we conducted a risk assessment at the planning stage, identifying areas where harm could arise, such as psychological distress or social stigma. We implemented measures such as providing psychological support, ensuring sensitive topics were handled with care, and guaranteeing anonymity to prevent social stigma. Regular debriefing sessions were also held to address any concerns that arose during the research process.

Confidentiality: To safeguard participant information, we employed stringent data security measures, including encrypted data storage, restricted access protocols, and regular audits. We

ensured that all team members were trained in data confidentiality principles. The dissemination of results was carefully managed to prevent any unintentional disclosure of participant identities or private details, with all reports undergoing a thorough review to ensure compliance with confidentiality standards.

Anonymity: Anonymity was maintained through the use of pseudonyms and data consolidation techniques. Each participant was assigned a fictitious name, and all identifying information was removed from the data sets. In our publications and presentations, we presented aggregated data or thematic insights, ensuring that no individual responses could be traced back to any participant.

By incorporating these detailed methods and practices, our research not only adhered to the ethical considerations outlined by Hennink et al. (2011) but also reinforced its integrity and trustworthiness. Each step taken in the ethical process was carefully designed to respect and protect the participants, thereby upholding the highest standards of ethical research. For this study, all five participants were emailed detailing the research's scope, how their participation would contribute, and the assurance that their identities would be anonymized in the study's final version. This was further reaffirmed face-to-face before each interview began. The participants were explicitly reassured of the researcher's commitment to upholding robust ethical principles throughout the research process, ensuring their ease and comfort during the interviews.

CHAPTER FOUR
RESULTS

4.1 Introduction

This chapter provides the findings from the qualitative data analysis performed on the responses provided by the key informants to the various interview guide questions. The present research seeks to unearth ecopreneurship and its impact on the drive toward sustainable business models. The study further discussed whether ecopreneurship is best achieved through university study or through learning by doing (practice), or a mixture of both.

The remaining portion of this chapter was divided into five sections, with section 4.2 to 4.3 addressing the research questions. Section 4.2 illustrated the demographic data of the key informants. Section 4.3 presented the results of the thematic analysis on what drives ecopreneurial study to practice. Section 4.3.2 presented the qualitative data results on why some ecopreneurs succeeded without theoretical based knowledge. Section 4.3.3 presented the qualitative data findings on the conflicts and challenges that arise about ecopreneurs transcending their knowledge acquired in school to everyday entrepreneurial practice. Lastly, Section 4.3.4 provided the outcomes of the analysis, thus whether the study of ecopreneurship has imparted entrepreneurial drive.

4.2 Demographic Data

This section presents the demographic data of the key informants, as shown in the table below. The table presents a snapshot of five key informants involved in ecopreneurial endeavours, offering insight into their diverse backgrounds and the nature of their sustainable businesses.

Key Informant 1, based in Ghana, is a married female with a Bachelor's degree in Metal Products Design. Holding the position of CEO, she specializes in crafting accessories made from recycled glass, aligning her creative skills with sustainable practices.

Key Informant 2, operating across Italy and Africa, is a married female with a Bachelor's degree. She leads an association dedicated to environmental protection and women's empowerment, reflecting her commitment to both sustainability and gender equality.

Key Informant 3, also from Ghana, is a male CEO with a Bachelor's degree. He channels his innovative spirit into creating products from plastic waste, driven by environmental concerns and a desire for sustainable solutions.

Figure 2: Demographic data of Key Informants

De-identified Interviewees	Country/Region	Sex	Marital status	Education level	Job position	Type of Ecopreneurial business
Key informant 1	Ghana	Female	Married	Bachelor's degree (Metal products design)	CEO	Accessories made from recycled glass
Key informant 2	Italy/Africa	Female	Married	Bachelor's degree	CEO	An association focused on environmental protection and women empowerment
Key informant 3	Ghana	Male	Married	Bachelor's degree	CEO	Creating innovative products from plastic waste
Key informant 4	Ghana	Male	Married	Bachelor's degree	CEO	Social enterprise focused on finding sustainable alternatives to single use plastics.
Key informant 5	Ghana	Male	Single	Bachelor's degree	CEO	Social enterprise

Source: Primary data

Key Informant 4, another male CEO in Ghana, is married and holds a Bachelor's degree. His social enterprise focuses on seeking sustainable alternatives to single-use plastics, addressing pressing environmental challenges.

Key Informant 5, based in Ghana, is a single male CEO with a Bachelor's degree. He manages a versatile social enterprise with a broad sustainability focus, indicating an interest in tackling various aspects of social and environmental sustainability.

These profiles underscore the diversity of experiences, motivations, and educational backgrounds among the ecopreneurs, illustrating the multifaceted nature of their efforts to promote environmental sustainability and address pressing global issues.

Since ecopreneurship is environmental-centred and to gain further insight into the background of the key informants, they were asked the question 'Why care about the environment?" Thematic analysis of the provided responses revealed a range of reasons explaining why the key informants cared about the environment. The identified themes were resource utilization, economic implications, cultural significance, ethical and moral responsibility, human health, problem-solving through entrepreneurship, personal connection and legacy, global crisis, and public awareness.

Resource Preservation: Multiple informants pointed out that a significant amount of resources crucial for business operations and revenue generation come from the environment. Ignoring environmental care puts these resources at risk (Key Informant 3).

Economic Implications: Beyond ethical considerations, the care of the environment was framed as an economic issue. Businesses often rely on natural resources; neglecting environmental concerns could lead to resource depletion that affects business operations (Key Informant 2).

Cultural Significance: Some informants mentioned that their local communities have traditions that are inherently sustainable and focus on ecopreneurship. Recognising and channelling resources towards these practices were considered important for environmental conservation (Key Informant 1).

Ethical and Moral Responsibility: Key informants indicated that human beings have a moral obligation to take care of the environment, which sustains life in multiple ways. This point of view extended to the notion that businesses that neglect their environmental impact are doomed to collapse (Key Informant 3).

Human Health: A sustainable and safe environment is directly related to the availability of healthy human resources for organisations. If the environment suffers, it has a cascading impact on human health and, therefore, productivity and business operations (Key Informant 3).

Problem Solving Through Entrepreneurship: One view emphasized that entrepreneurship is essentially about solving problems, including environmental problems. Entrepreneurs see an opportunity in addressing these challenges, turning it into a business that benefits both the community and the environment (Key Informant 4).

Personal Connection and Legacy: Some informants express a deep personal connection to the environment based on where they grew up. They express a desire to conserve the beauty of nature for future generations to enjoy (Key Informant 5).

Global Crisis: The acceleration of climate change was noted as a pressing concern that everyone, including businesses, should address. Ignoring it was not an option anymore (Key Informant 2).

Public Awareness: A lack of public interest or understanding of the environmental crisis was observed. Educating the public and directing attention and resources towards environmental care was seen as essential (Key Informants 1 and 2).

These themes collectively stress the multi-faceted reasons for caring about the environment, from economic and resource-based reasons to ethical and personal motivations.

4.3 Results

4.3.1 Drivers of Ecopreneurial Study to Practice

This section of the study attempted to answer the first research question, "What drives ecopreneurial study to practice?" The key informants were interviewed about what motivated/inspired them towards the establishment of their business. Below are the responses provided by the key informants:

> "I am an art student from primary school, so I have always been familiar with creative art. I studied industrial art at the university where I majored in metal products design which has components of jewellery design. It was mainly about making jewellery made in Ghana beads of which I was ignorant of the material used in making them. I didn't understand that despite the booming beads industry in Ghana. I had to rely on foreign materials for making beads accessories. It was also just a passion I developed which I think was influenced by

my Krobo tribe. Bead making in Ghana is mostly associated with the Krobo tribe. I can say beads making is a source of livelihood for the people of my tribe. I decided to advocate for made in Ghana beads which have some components of sustainable materials. However, the use of sustainable materials in my beads making was by chance but the made in Ghana beads was intentional."

– Key Informant 1

"We realized that plastic is the one of the biggest problems we face today therefore we started with activities where people were called to collect plastics from the environment. Moreover, it's also an organization which takes care of the preparation of these waste materials for the recycling process. People end up throwing wastes on the environment without a proper disposal. Basically, we just call people to collect plastic waste and bring it to the recycling centre. Our model developed and changed over time. For instance, in Ghana, we are establishing some compounds where we educate people to do separations of the waste themselves. At the beginning we asked people to collect waste and bring it to our centre but now we ask them to do the separation themselves to speed up the process."

– Key Informant 2

"Um ok, so, I, in 2017, I got selected for Obama's young African Leaders programme, so I was out in Nigeria for five weeks where I received training and the focus of the training was on the sustainable development goals. When I came back to Ghana I wanted to start something in some of the sustainable development goal areas and sustainable communities and cities, water sanitation, life on land, life in the ocean, and climate action were the goals that appealed to me. Um, so I was thinking about what some of the biggest problems are regarding these goals, and I thought plastic pollution is like a huge problem when I look around even though there is a lot of talk about Accra being the cleanest city in Africa and all that, but I do not see it. And for me I felt like the future I wanted I am the only one who can create that future for myself. So, I wanted to show my leaders and the politicians what sustainable communities and cities without plastic pollution look like. Um, so I made a Christmas tree from plastic waste, it went viral and the following year I started to try out a couple of other innovations and things that I thought people might be willing to pay for, people might be interested in and uh it became a company. So, I did not initially plan to start a business. I was just trying out some stuff with plastic waste just to create awareness or just to draw peoples' attention to the problem and explore opportunities that exist in terms of what we can make from the waste, so that's how I started."

– Key Informant 3

"Yeah, good question. Uh, I mean, so I, I can just give you a little background. I mean, so I made mathematics in education for my masters, and then I had a chance to, um, travel to Germany for some time. And during my time in Germany, I got to see how they care for the environment. For example, we go for shopping without plastics. We are even drinking water from reusable bottles. And, um, I mean, upcycling recycling is part of daily life. So looking back home and seeing the problem we have, it was for me one main reason to come back to Ghana to start something that could make a change. So I think, um, basically for me, um, around all the issues of climate change and the problems we have, what I witness in Europe really like gave me that change of mind to come and do something here."

– Key Informant 4

"Well, being a forester, I was exposed to so much knowledge which was theoretical based and also looking at the problems of our community such as energy deficit coupled with different alternatives to unsustainable energy sources. This influenced me to think otherwise and do something around providing solutions that are nature based as well as providing solutions that were sustainable. I then started an informal training where I was trained in biomass waste recycling by pyrolysis, to make brocade as an alternative for charcoal, and also an alternative for fire. I realized that my educational background, which was forest conservation, was in line with protection of the forest to ensure reducing so much pressure on forest resources. But over time, a few other things have been coming up, widening my knowledge in other aspects of sustainability."

– Key Informant 5

Thematic analysis of the various responses provided led to the identification of six (6) core themes namely personal passion and background, environmental concerns, education and exposure, sustainable development goals, innovation and creativity, community and livelihood, and educational background and training. Environmental concern was observed to be the predominant driver, followed by personal passion and background.

Environmental Concerns: Several informants expressed concerns about environmental issues, particularly related to plastic pollution (mentioned by Key Informant 2 and Key Informant 3) and climate change (mentioned by Key Informant 4). These concerns motivated them to take action and address these challenges.

Personal Passion and Background: Informants mentioned their personal interests and backgrounds as driving factors. For example, Key Informant 1 discussed their passion for jewellery design and the influence of their Krobo tribe's association with bead making. Key Informant 5's background in forestry and exposure to environmental issues in their community influenced their ecopreneurial journey.

Education and Exposure: Key Informant 4 highlighted the influence of their experience in Germany, where they observed sustainable practices and environmental consciousness. They were inspired to bring similar practices back to Ghana. Key Informant 5's education in forest conservation and informal training in biomass waste recycling by pyrolysis led them to develop eco-friendly alternatives like briquettes for charcoal and fire. Their educational background played a significant role in their entrepreneurial efforts.

Sustainable Development Goals (SDGs): Key Informant 3 mentioned participating in a program focused on the Sustainable Development Goals (SDGs) and how this experience inspired them to work on goals related to sustainable communities, plastic pollution, and environmental sustainability.

Innovation and Creativity: "Key Informant 3 initially engaged in creative projects like making a Christmas tree from plastic waste and exploring innovative solutions to raise awareness about environmental issues. This creativity later evolves into a business venture.

Community and Livelihood: Key Informant 1 highlighted the importance of bead making as a source of livelihood for her Krobo tribe. Her social enterprise aimed to advocate for made in Ghana beads with sustainable materials, emphasizing the connection between their business and the community's well-being.

These key themes reflect the diverse motivations and inspirations that drive individuals to engage in ecopreneurial activities, with a common thread of environmental awareness and a desire to make a positive impact on sustainability-related issues.

4.3.2 Success of Ecopreneurs without Theoretical-based Knowledge

This section of the study sought to answer the second research question, "Why have some ecopreneurs succeeded without theoretical based knowledge?"

Types of Training and their Impact on Business

The question of whether respondents had received any kind of training was posed to them, formal or informal and how that training had impacted their ecopreneurial business.

"I took beading class in 2014 but the actual business of beads-making started in 2015 when I started making beads for myself and my co-workers. I started taking orders and going to trade fairs in Ghana. The few classes I took impacted, regardless there are some things one might ignore irrespective of how familiar and good you are in your field. The training and the certifications gave me some kind of confidence in terms of how I interact with others about what I do." – Key Informant 1

"We have different kinds of training. We provide our employees with technical training, where employees have learned how to deal with the waste. We also have community training which focuses more on the problems of the environment and the impact of people's behavior on the environment. So, I think environmental training is mandatory in our organization. This training helps employees to be aware of what they are doing as well as working in a safe environment." – Key Informant 2

"Um, yes, so I studied marketing in the University of Professional Studies as part of my course, I took a one-year programme on environmental management, so yes. Aside that, I have also been part of incubation programs, I was part of Ghana climate innovation centre incubation program in 2019, that's a world bank group and Netherlands government funded program, yes. Then, also, um I have taken some uh yearly online courses on climate and environment, so, yes, those were some of the influences on my journey. Yeah, so these trainings have been very relevant and very useful. Um, especially when I started, one of the things that I was able to get right from the beginning was uh the business model, which was very important where I was able to design a proper and an effective model that I thought was what I needed to run the project. And that has aligned everything that we do at our firm, and has helped us to be able to make many impacts out there in the key areas that we worked. Yes so, the trainings I have received had a profound impact on the success and milestone that we have achieved." – Key Informant 3

"Um, I mean, uh, I would say yes, I've had some form of training because, um, definitely we are doing sewing, so I, I took on some, some sewing courses, how to make patterns and stuff like that. Yeah. So some form of training. Yes. Yeah, I mean, um, I would say greatly because like I mentioned, I made education, I mean mathematics for my masters, educational leadership and management for my masters. And it's really, um, um, I mean, sewing is not something that I studied or something, but choosing that part of, of business

or choosing that part of profession, um, I mean, the course I took really impacted positively. I mean, I don't sew every day, but I'm able to transfer that knowledge to my workers who are handling production. So, I mean, it's impacted with yeah." – Key Informant 4

"I've been doing more informal training such as hands-on training with entrepreneurs who are already in the same field. I also build my capacity in business development through training with local innovation hubs. I have been trained by United Social Ventures lately. I also got trained by Challenges Group, through this The Future Makers fellowships which all together brought a great impact to my organization." – Key Informant 5

Based on the diverse responses from key informants to the question, "Have you had any form of training, formal or informal? How has it impacted your business?" several key themes emerged that offered insights into the types of training the ecopreneurs underwent and how this training impacted their businesses.

Types of Training

The thematic analysis of the qualitative data revealed that the types of training the ecopreneurs underwent ranged from formal education, specialized skill training, environmental training, institutional training, to informal training.

Formal Education: Some respondents, like Key Informant 3, have undergone formal educational training, attending courses at colleges or universities. This type of training typically leads to a degree or certification.

Specialized Skill Training: Other informants took specialized training courses to acquire specific skills such as beading or sewing (Key Informants 1 and 4). These are vocational in nature and are often hands-on.

Environmental Training: For some businesses with a focus on sustainability or waste management, environmental training played a significant role (Key Informant 2). This training can be mandatory and aims to create a culture of environmental responsibility within the organization.

Institutional Training: Programs or fellowships offered by established organizations, such as the World Bank (Key Informant 3) or various fellowships (Key Informant 5), provided additional avenues for specialized training.

Informal Training: Some respondents, like Key Informant 5, have also relied on hands-on training or mentorship from other entrepreneurs in the same industry to build their skills.

Impact on Business

Across the board, the impact of these different training types on the businesses was pronounced. Some of these impacts were enhanced skills and knowledge, increased confidence, environmental awareness, business strategy and development, and employee training and development.

Enhanced Skills and Knowledge: For most, training provided a platform for acquiring specific skills or knowledge that they could directly apply to their businesses (e.g., Key Informants 1, 4, and 3).

Increased Confidence: Key Informant 1 noted that having formal training or certification led to increased confidence when interacting with others in the industry.

Environmental Awareness: For businesses with an environmental aspect, training played an essential role in creating a culture of environmental responsibility, as noted by Key Informant 2.

Business Strategy and Development: More comprehensive trainings, especially those that touch on business models or development, have impacted the overall business strategy (Key Informant 3).

Employee Training and Productivity: Key Informant 4 emphasized that the training he received was crucial not just for him but also for training employees, thereby enhancing operational success.

In sum, the key informants view both formal and informal training as having a significant positive impact on their businesses. This impact is felt in areas such as skill development, confidence building, and overall business strategy. While each type of training offers unique benefits and challenges, the consensus is that training is invaluable for business success.

Influence of Formal Education and Theoretical Knowledge on Business Operations

In a bid to thoroughly answer the second research question, which is "Why have some ecopreneurs succeeded without theoretical based knowledge?" further probing was done by the instrumentality of the interview guide question, "Were the operations of your business based on some knowledge acquired from school or any theory?" The following were provided as responses:

"I am an art student from high school so concepts like element design, color psychology and all the basis of general fashion and arts were all acquired formally in school. So I am able to apply it in my business now."

– Key Informant 1

"We have a team made up of people with a background in economics, business management, communication, and engineering. The shared knowledge allowed us to come up with a model which we set up as an operative system. Basically, we come up with a model, practice, and develop it. As I said, the more we practice the more we learn and the more the model changes."

– Key Informant 2

"Um, well, so I studied some in senior high school. Naturally, I am somebody who likes to identify problems and design solutions to tackle the problems. That is who I am as a person. Um, so I will say that aside from school, uh just my natural gift and talent have also had an influence through the journey."

– Key Informant 3

"No. Um, I mean, at a point, if I want to go back to what motivated me, it's also about, I mean, my personal interest or passion to keeping the environment clean or something. So it's all a new cycle for me. Um, three and a half years ago that I would say that it was like a whole new space for me to learn, put myself in the space, learn what happens in this space, and see what I can contribute to. Yeah."

– Key Informant 4

"Some of these activities are based on some of the things I studied, but what I studied in class actually contributes about 5 to 10 % while the rest is just learning, learning by experience."

– Key Informant 5

Based on the responses to the question, "Were the operations of your business based on some knowledge acquired from school or any theory?", several key themes were identified. These themes were application of formal education, interdisciplinary team knowledge, innate talents and problem-solving, personal interest and new learning, and continuous learning and adaptation.

Application of Formal Education

Key Informant 1 explicitly mentioned the role of formal education in his business. Concepts such as element design and colour psychology were acquired through formal educational training and are applied in the business. Unfortunately, formal education appears to be limited in its application as far as ecopreneurship was concerned. Key Informant 5 stated that formal education contributed only 5-10% to their business operations. Most of their knowledge and operational strategies came from experiential learning.

Interdisciplinary Team Knowledge

Key Informant 2 emphasized that their team's diverse educational backgrounds in economics, business management, communication, and engineering allowed them to come up with an operational model that they continue to refine through practice.

Innate Talents and Problem-Solving

While some formal education influenced Key Informant 3, it was also emphasized that natural talents and inclinations played a significant role in their approach to business, particularly in problem identification and solution design.

Personal Interests and New Learning

Key Informant 4 noted that the primary motivator for their business operations was personal interest and passion, particularly for environmental cleanliness. For them, this was a new area requiring learning and adaptation, rather than the application of formal education.

Continuous Learning and Adaptation

Common across several key informants is the idea that learning is ongoing. Key Informant 2 talked about refining their business model, while Key Informant 5 emphasized "learning by experience."

In sum, while formal education does play a role in some businesses, it is often complemented or even surpassed by other forms of knowledge and experience, including interdisciplinary team skills, natural talents, and ongoing, experiential learning. This presupposes that reasons accounting for why some ecopreneurs have succeeded without theoretical based knowledge or formal education may range from interdisciplinary team skills and knowledge, innate talents and problem-solving, personal interests and new learning, to continuous learning and adaptation.

Impact of Formal Education vs. Continual Practice on Business Performance

To explore the impact of formal education as against continual practice on business performance, the key informants were asked whether their business could have performed better by acquiring knowledge in school or continual practices could bring out the best result. The responses provided to the question by the key informants were as follows:

"I think the way knowledge is being acquired now, the best way is to acquire and apply it simultaneously. This is because new knowledge is produced everyday through experiments and research. For example, doing a master's in sustainability will not really benefit what I am doing now. I was trying to partner with the CSR research department a couple of months ago to see how we could develop this but then I was discouraged by their bureaucratic hurdles. There is a certain girl I follow on Instagram who does a similar thing. That is turning glass waste into soil which is then spread at the coastal beaches of California. You could see how the research institutions are able to add to her work by offering research assistants, but this does not happen in Ghana."

– Key Informant 1

"As I said, we are learning by practice; on the other hand, we are also studying. Because this is an issue that is continuously developing and the more, we develop the more we find different perspectives on sustainability. Sometimes it is very hard to face the ideas of sustainability with the reality of fact. Most of the time it is very difficult to combine some economic factors with sustainability ideas. We are still studying and learning to come up with different perspectives in order to develop creative ideas on how to make sustainability possible in the current economic environment."

– Key Informant 2

"Well, so, the sector I am in is pretty much a very new sector in our part of the world. What is been taught in school as I said earlier there is a knowledge gap. Um, practicing has allowed me to learn better and quicker and connect with partner organizations that are out there working in the field globally than what school would have taught though practicing was a better idea."

– Key Informant 3

"I mean, um, first of all is having the knowledge in school because right now what we are trying to do is to grow the next generation of entrepreneurs or eco entrepreneurs. Because right now, even if you take just the space of upcycling and recycling. So, I do more of

upcycling. We do more of recycling, and these are two big spaces we can have more people to venture in because just talking of upcycling in its own, it's a whole space that we can have a lot of people doing stuff. Talking of recycling is a whole space. People can do a lot of stuff. So, I think if things like this are being taught in school, which of course we do, we don't only talk to the kids, but then we actually give them practical, um, I mean, I mean hands on practice where they can make these bags on their own people. I mean, trashy bags for example, they are also dealing with using plastics to sew bags. If these things can be fused in the education system, I think it'll be, it'll be a good, um, I mean, um, stage for the next generation to take up challenges like this. And also, for the continuous process, of course, we are in the field, we, we need to develop, the accountants are writing their professional exams, they are going forward. And I think it'll be a good chance where we also have the chance to also grow our knowledge. Presently, how we grow ourselves is conferences that we attend, um, talking about what issues, what is happening in other spaces and how we can also adapt them to grow what is happening down here. So, I think both of them, um, we really, really are of, of, um, great interest. Yeah." `

– Key Informant 4

"I think continuing in practice would be more important in driving the business forward. From my own experience, as much as we have people who are going to study vocational school skills, it is a good foundation, I would say. But when you get to work, it has a lot of dynamics, and it is more diverse. Doing something practically gives confidence and put you in a better position to manage your business."

– Key Informant 5

The responses provided by the key informants touched on various overarching themes such as approaches to learning, institutional barriers, knowledge gaps and innovations, role of formal education, continual growth, and economic realities. In examining the varying perspectives on the role of formal education versus hands-on experience in business operations, several sub-themes emerged.

Approaches to Learning

Simultaneous Learning and Application: the approach to learning is not unilateral. Key Informant 1, for example, highlighted the need for simultaneous learning and application, particularly in rapidly advancing fields.

Learning by Practice: Simultaneous learning and application reflected an emerging belief that formal education, while beneficial, is often best when complemented by immediate, real-world application. This sentiment was echoed by Key Informants 2, 3, and 5, who strongly favoured learning by practice. They suggested that the hands-on, trial-and-error method allowed them not just to apply theoretical knowledge but also to understand its practical limitations and advantages.

Institutional Barriers

Bureaucratic Hurdles in Academia: Some respondents touched upon the bureaucratic hurdles posed by academic institutions. Key Informant 1 specifically mentioned how these obstacles discouraged collaborative research opportunities, thereby indirectly affecting the advancement of their business. This raises questions about whether traditional educational settings are agile enough to keep up with innovative sectors. This segues into the third theme surrounding knowledge gaps and the evolution of certain sectors.

Knowledge Gaps and Innovations

Emerging sectors: Key Informant 3 emphasized that the ecopreneurship industry is relatively new, which means that the formal education system has yet to catch up in offering directly relevant courses. However, this is not to say that formal education has no role.

Role of Formal Education

Foundational Knowledge: On the contrary, Key Informant 4 underscored the importance of formal education as a foundation for practical work. While most respondents leaned towards the importance of practical experience, they also acknowledged the role of foundational knowledge that can be acquired in a formal educational setting (Key Informant 4).

Next-Generation Education: They further elaborated that formal educational systems need to evolve to prepare the next generation for real-world challenges, particularly in emerging sectors like upcycling and recycling, thus a circular economy (Key Informant 4).

Continual Growth

Ongoing Development: Ongoing development was another consistent theme. Key Informants 4 and 5 talked about the significance of continuous learning through avenues like conferences

and networking. These forms of continual growth were cited as crucial to staying current and adaptable in their respective fields.

Economic Realities

Balancing Economic and Sustainable Goals: Lastly, economic realities cannot be ignored. Key Informant 2 mentioned the complex challenge of aligning sustainability goals with economic imperatives, thereby pointing to an ongoing need for creative problem-solving skills, potentially learned both formally and informally.

Overall, there is a shared belief among the informants that while formal education provides a foundational framework, continual practices and hands-on experiences are vital for the success and growth of their businesses.

4.3.3 Challenges and Conflicts in Translating Academic Knowledge to Practical Entrepreneurship for Ecopreneurs

This section of the study sought to answer the third research question, "What are the conflicts/challenges that arise about ecopreneurs transcending their knowledge acquired in school to everyday entrepreneurial practice?" To address the foregoing research question, key informants were asked to indicate whether they have conflicting issues or difficulties trying to merge knowledge on sustainability acquired in school into practices. The responses provided were insightful. Here are the responses:

> "Honestly, in Ghana people are more interested in the verbal aspect of sustainability but putting it into practice is difficult for people. People are more interested in attending conferences, workshops, seminars but the actual bit of trying to come up with initiatives to tackle sustainability issues is minimal. For instance, I did not study any sustainability programme so it is very difficult for me to be abreast with sustainability issues. The knowledge I apply in what I do is based on things I learn along the way such as the seminars, and conferences I attend and my interactions with people in the field. It is a general thing which has passed on from one generation to another. Turning glass waste to a second material is even out of scope for me ... like I said that whole process is not in theory but rather in memory that is an oral tradition form of work."
>
> – Key Informant 1

"When we were in school, sustainability was not a big issue. It's not that we have sustainability theories in our background that could be used in our daily operations. In the beginning of our activity, we were concerned about sustainability. We were going to people and firms trying to raise awareness on these issues because people lacked the knowledge on sustainability. For example, I am currently taking a course on eco social responsibility in which we talk about governance, human and environmental factors of sustainability but it is not something we used as a theory at the beginning."

– Key Informant 2

"Um, I mean what we studied in school here is not, is more like the basic and rough side of things, um a lot of the things I do, a lot of the things I know about now, the school curriculum do not actually teach those things, most of those things. Um, I had to take some extra courses uh to re-align my knowledge about the sector. Um, and so there is a gap, I mean there is a knowledge gap in terms of um what is critically important that I need to know or understand like issues relating to circularity, issues relating to um recycling issues, issues relating to climate change, uh sustainability. What is been taught is not quite aligned with what is actually happening here in the real world."

– Key Informant 3

"Um, hard question, but if I could remember level hundred, I remember we did something on sustainability, blah, blah, blah, but it was more of what happens in the atmosphere, in the stratosphere, blah, blah, blah. But with our projects, we are really coming back to the grassroots because if you are looking at changing where Ghana is now, with the issue of plastic waste pollution, we are definitely not looking at what is happening in the atmosphere, but what we can do with regards to behavioral change. Because one, I buy food, how the food is packaged, you know, really has no theory, but the individual deciding whether to eat the food where he or she's buying it or how he or she decide to package it. So, I think, um, what I had the chance to study in school and what we are teaching now or preaching now is they are, they're apart. I mean, they, they, they're nowhere, um, close to each other. Yeah."

– Key Informant 4

"Now, in most cases, we get some kind of conflicting issues. We do briquttes from biomass waste we actually have to, we actually have to do pyrolysis. And the pyrolysis itself involves burning of waste as a result some carbon dioxide is given off. So definitely sometimes we are also making an additional carbon footprint. But when we look at what

we offset, probably way bigger than what we emit. So, that is one of the conflicting issues we face."

Thematic analysis of the responses provided by the key informants revealed the following key themes: (i) there is a gap between practice and theory, as far as ecopreneurship is concerned; (ii) the issue of local context; (iii) lack of prior education on ecopreneurship and sustainability; (iv) learning outside the classroom; (v) cultural and behavioural challenges; (vi) operational conflicts, and (vii) gap between awareness and action. The themes constitute the challenges and conflicts ecopreneurs may go through in translating academic knowledge to practice.

Gap Between Theory and Practice: All informants indicated a gap between what is taught about sustainability in formal education settings and what is practically needed or implemented in their local communities or industries. This reflects the broader disconnect between academic teachings on sustainability and on-the-ground challenges.

The Issue of Local Context: Local context matters Informants from Ghana specifically highlighted that the challenges and concerns in their local context often don't align with broader sustainability theories. This suggests that there's a need for more context-specific sustainability education and initiatives.

Lack of Prior Education: Several informants mentioned that sustainability was not a significant part of their educational background, either because the topic wasn't covered at all or because it was only covered in a superficial way. This lack of foundational knowledge affects their ability to integrate sustainability into their work. As a result, learning outside the classroom appears to be commonplace among ecopreneurs.

Learning Outside the Classroom: Multiple informants indicated that much of their knowledge and awareness around sustainability issues comes from sources other than formal education, such as seminars, workshops, and on-the-job learning. There seems to be a reliance on extracurricular or informal ways of acquiring this critical knowledge.

Cultural and Behavioural Challenges: Informants mentioned that there are cultural or traditional behaviours that influence sustainability efforts, from public interest only in discussing the topic rather than acting on it, to older practices being passed down generations that may not align with modern sustainability goals.

Operational Conflicts: One informant specifically mentioned the operational conflict in sustainability practice, citing the example of pyrolysis in biomass waste management. While

the process helps manage waste, it also emits carbon dioxide, highlighting the complexity and often conflicting nature of sustainability practices.

Gap between Awareness and Action: While there's a general interest in attending conferences and workshops on sustainability, the actual implementation of sustainable initiatives is minimal, suggesting a gap between awareness and action.

These themes collectively suggest that while there is awareness and interest in sustainability, there are several barriers and complexities that make the integration of sustainability knowledge into practical applications challenging.

4.3.4 Influence of Ecopreneurship Study on Entrepreneurial Drive

This section of the study sought to answer the fourth research question, "Has the study of ecopreneurship influenced entrepreneurial drive?" Answering this research question, key informants were quizzed if they have any previous exposure to ecopreneurship or business study at school level. The following responses were provided as responses to the question:

> "No, everything I do now is plug and play. For example, I am currently taking a course in integral cultural heritage and sustainability development on the SDGs website, which is about cultural and heritage practices around the world which is run by UNESCO. Like I said, most of the things we do are just along the way; however, I do sometimes ask questions from experts of the field but not any formal training."

> – Key Informant 1

> "Yes, like I said in the beginning we mainly come from an entrepreneurship and business development field. As an organization we have a social business model. We establish self-sustaining businesses so that they can continue in case the organization runs out of funds."

> – Key Informant 2

> "I had a science background from secondary school when it comes to innovation and uh working on ideas uh that is my background. But with the environmental management course, it was at the university level."

> – Key Informant 3

"Um, I mean, no. I mean, I, if I say no, that, that entirely would be wrong, but, uh, there are some liberal courses that we took in the university, I think first year. And I think, um, it forms some basis for what we do daily. So, I would say yes, but that's like one out of 10, yeah."

– Key Informant 4

"Certainly not, but from where I grew up, I did engage in some traditional activity of cultivating. Where I sometimes would incorporate some aspect of raising vegetable seedlings for sale. But it's really not formal." – Key Informant 5

Thematic analysis of the responses provided by the key informants to the question on previous exposure to ecopreneurship or business study at the school level unearthed the 11 key themes: lack of formal training, learning on the job, supplemental online education, social business models, university-level exposure, background in science and innovation, mixed experiences, informal and cultural learning, adaptive strategies, and funding concerns.

Lack of Formal Training: Most informants indicated that they did not receive formal training in ecopreneurship or sustainability at school. This aligned with previous observations about the gap between academic curriculum and real-world sustainability needs. For example, Key Informants 1 and 5 specifically highlighted that their current ecopreneurship practices were not based on any formal training in the school setting, with Key Informant 5 responding with an emphatic "Certainly not" to the question, "Do you have any previous exposure to ecopreneurship or business study at school level?"

Learning on the Job: Some informants noted that much of what they know has been learned "along the way" or "on the job," sometimes supplemented by online courses or direct consultations with experts. Key Informants 1 and 3 mentioned that a lot of their knowledge and skills have been acquired while working in the field, thereby underscoring the importance of experiential learning in this context.

Supplemental Online Education: Some informants said they were utilizing online resources to gain additional knowledge. For example, one is taking a course on the SDGs website related to cultural heritage and sustainability, run by UNESCO (Key Informant 1).

Social Business Models: At least one informant came from a background that involved a focus on entrepreneurship and business development, specifically mentioning a social business model aimed at self-sustainability (Key Informant 2).

University-level Exposure: Some exposure to relevant themes appears to have happened at the university level, rather than in earlier educational settings, for at least one informant.

Background in Science and Innovation: One informant mentioned a science background from secondary school as influential, though this was in innovation more generally rather than specifically in ecopreneurship or sustainability. Key Informant 3 received some formal exposure to relevant topics at the university level, but this was mainly in environmental management rather than ecopreneurship.

Mixed Experiences: The responses provided by the key informants indicated varied degrees of exposure to formal education in this area, with some having some tangential courses that "form some basis" for their daily work, but often this was minimal ("like one out of 10"). For example, Key Informant 4 offered a mixed review, acknowledging some utility in tangential courses taken during university, but also admitting that these formed only a minimal part of their current work. This highlights the insufficient depth of relevant educational exposure for practical application.

Informal and Cultural Learning: At least one informant mentioned learning through traditional activities like cultivating and raising vegetable seedlings, suggesting that informal or culturally specific practices can also be influential.

Adaptive Strategies: Several informants have adapted to the lack of formal education by seeking other avenues for learning, such as asking questions from experts in the field or engaging in self-study through online platforms.

Funding Concerns: The need for self-sustaining businesses is mentioned, highlighting the practical concern of ensuring long-term viability, especially if external funds run out.

These themes collectively illustrate a landscape where formal education in ecopreneurship and business sustainability often falls short, necessitating a variety of other learning approaches ranging from on-the-job experience to online courses and traditional practices.

In furtherance to the above question on previous exposure to entrepreneurship, the key informants were also asked the question, "Do you wish to acquire more education to impact /improve your entrepreneurial drive?" The responses provided were as follows:

"Definitely yes but I think where to acquire is a bit limited in Ghana, I have tried to look up online courses, but they are not really skewed to sustainable fashion, or anything related to what I do."

    – Key Informant 1

"We are continuously studying and learning. We are always open to new ideas, perspectives, and new thinking. That is an approach we think we can use to create a better sustainable kind of business model."

    – Key Informant 2

"Oh yes, I do. I have plans of reading some uh reading a master's program in the area of environmental sustainability, and also sustainability finance and a couple of other areas relating to climate. So, yes, I have interest and I am making plans to do that. Um, so the space I work in is an innovation space. It is heavy on entrepreneurship, and it is heavy on research. All these things require a bit of practice and also knowledge. The two has to be combined together. Also, the sector is a sector that is heavily regulated, and when you work in a sector that is heavily regulated, when laws can change, where a lot of things can change very quickly, you have to keep acquiring knowledge whiles keep improving upon practice, so one cannot go without the other."

    – Key Informant 3

"Of course, in, in our line of business, because, um, I would say three, three and a half years ago when we started this project, we barely have people who are into the production stuff like this. Um, today we have companies in-house that are, I mean, in Ghana that are producing, um, uh, they are producing cutlery sets from Bamboo. We have companies in Ghana that, that are producing, um, bottles and stuff like this from Bamboo. And I think it's a bigger space that we need not to resort to the UK. I was recently back in Germany to, with a bigger company to learn some processes of what they do. I mean, because we are also looking at upscaling our production and you know, these are things I feel we don't have to spend so much traveling

elsewhere to learn. We could have them, um, be studied in the country. Because when you talk about sustainability, it all comes to play. The more you fly, the more fossil fuel you burn and, I mean, we can look this in that channel, you know? So, um, of course, yes, um, it's of great interest to upgrade what we do. It's of great interest to upgrade our workers to also bring them to a certain level of their understanding very well what they are contributing to in the environment. And this can be well appreciated if trainings are organized, if they get like the next step in the, in the line of business. Yeah."

– Key Informant 4

"Of course? Because now we are looking at the ecosystem, conservation incentives are coming up, and many more schemes of ensuring sustainability and building businesses are mushrooming, or they are even existing. So, I would really want to go back and study to help me contribute to my business."

– Key Informant 5

All the key informants answered in the affirmative to the question, "Do you wish to acquire more education to impact /improve your entrepreneurial drive?" interest in further education for improving entrepreneurial drive, although there are various challenges and considerations ranging from specialization and local availability to worker training and sustainability.

The fact that the ecopreneurs have to look outside the formal education sector to fill their knowledge gap is a great indication of the importance of a working technical knowledge in driving ecopreneurship success. This assertion is affirmed by the unanimous willingness of the key informants to wanting to acquire more education to impact or improve their entrepreneurial drive.

4.4 Discussion

The primary objective of the study was to understand the relationship between formal ecopreneurial education and learning by doing (practice) using selected ecopreneurial firms as case studies. To achieve this goal, four specific objectives were set.

The first objective was to determine the factors that drive ecopreneurial study to practice. Delving into the drivers that steer individuals from the study of ecopreneurship to its actual

practice reveals a rich tapestry of motivations and inspirations. Thematic analysis of the various responses provided led to the identification of six (6) core themes namely personal passion and background, environmental concerns, education and exposure, sustainable development goals, innovation and creativity, community and livelihood, and educational background and training.

At the heart of many ecopreneurial ventures lie environmental concerns. The degradation of our environment, whether through plastic pollution or the perils of climate change, provides a potent catalyst for action. Juma et al. (2023) echoes this sentiment, emphasizing the central role of observable environmental challenges in sparking sustainable ventures. However, personal histories and experiences also hold sway in guiding ecopreneurial journeys. The personal passion and background theme resonates with the idea that an individual's past and personal interests can mold their entrepreneurial vision (Downing, 2005; Hurst et al., 2008; Suddaby et al., 2023). An illustrative example is the bead-making heritage of the Krobo tribe and its influence on Key Informant 1's venture.

Notwithstanding, it is not just the past that shapes people; it is also their exposure to different environments and cultures. Education and exposure have a significant bearing on shaping perspectives. Experiences, like that of Key Informant 4's time in Germany, underscore the influence of firsthand exposure to sustainable practices in inspiring localized actions. Kirby (2004) has long championed the role of both informal and formal education in imparting entrepreneurial spirit and direction. Global initiatives, particularly the Sustainable Development Goals (SDGs), likewise, serve as guiding stars for many. By providing a roadmap for a sustainable future, initiatives like the SDGs inspire action at both global and local scales. Sachs (2015) has elaborated on the influence of global objectives in prompting grassroots movements.

However, at the core of every entrepreneurial endeavour lies innovation and creativity. Entrepreneurs, by their very nature, often pioneer innovative solutions to prevailing problems. Key Informant 3's venture began with a simple yet creative project, aligning with Drucker's (1985) as well as Deakins & Scott's (2021) notion that innovation often serves as the heartbeat of entrepreneurship. Lastly, understanding and addressing community needs is vital. The community and livelihood theme underscores the importance of embedding sustainability within the socio-economic fabric of communities. By doing so, as seen in the example of Key Informant 1, entrepreneurs can ensure the local relevance and acceptance of their ventures (Muñoz & Cohen, 2017).

The second study objective examined why some ecopreneurs have succeeded without theoretical-based knowledge. In the ongoing debate about the role of formal education in entrepreneurial success, particularly in niche sectors like ecopreneurship, the qualitative findings offered some illuminating perspectives. These insights, obtained from the key informants, reverberate with multiple academic viewpoints and theories established over the years.

Starting with the concept of learning, the key informants underlined the value of simultaneous application and education. This principle of intertwining practical experience with theoretical knowledge finds roots in Kolb's Experiential Learning Theory from 1984. Kolb posits that the most effective learning processes delicately balance between hands-on experiences and abstract reasoning. However, when it comes to academia, not all is rosy. Several informants voiced concerns about bureaucratic hindrances in academic institutions. Their apprehensions resonate with Etzkowitz et al.'s arguments from 2000, which highlight that traditional academic structures can sometimes stymie innovation and entrepreneurial pursuits (Etzkowitz et al., 2000). This beckons the question: Are our current educational systems agile enough to support budding sectors? This thought introduces another concern — the evident knowledge gaps in rapidly emerging industries. The key informants, all of whom appear to be from the ecopreneurship realm, feel that the formal education system lags behind in addressing their industry's specific needs. Mosey and his colleagues in 2012 echoed similar sentiments, indicating that revolutionary entrepreneurial sectors often advance faster than the corresponding academic curriculum (Mosey et al., 2016).

Yet, it is worth noting that the essence of formal education has not been completely disregarded. Even as our informants champion the virtues of hands-on experience, they also acknowledge the foundational merits of structured learning. This dual sentiment aligns perfectly with a perspective shared by Gibb in 2002. Gibb emphasized that while formal education offers a foundational springboard, entrepreneurial learning must also cater to the tangible demands of the industry.

Beyond the basic frameworks, there is a unanimous agreement on the importance of continuous growth. The key informants highlighted the value of perpetual learning through platforms like conferences and networking. This ethos of persistent development and evolution is supported by Minniti and Levesque's 2008 work, stressing the indispensability of adaptation in an ever-changing entrepreneurial landscape (Minniti & Lévesque, 2008). Moreover, the intricate 'dance' between economic objectives and sustainable goals remains an ever-present challenge.

This complex equilibrium, as mentioned by the key informants, is also a focal point of Schaltegger's (2002) research on ecopreneurship.

The third objective of the study explored the conflicts/challenges that arise about ecopreneurs transcending the knowledge acquired in school to everyday entrepreneurial practice. Ecopreneurs face multifaceted challenges as they endeavor to translate academic lessons on sustainability into real-world entrepreneurial practices. The findings of this study shed light on these complex obstacles. Thematic analysis revealed the following as the challenges: gap between theory and practice, the issue of local context, lack of prior education, learning outside the classroom, cultural and behavioral challenges, operational conflicts, and gap between awareness and action.

At the heart of the challenges ecopreneurs face lies a pronounced disconnect between theoretical sustainability teachings and on-the-ground practicalities. Academic curricula often frame sustainability from a global perspective, occasionally overlooking the unique, tangible challenges specific regions, such as Ghana, confront (Aramali et al., 2022; Ferns, 2019). Consequently, while ecopreneurs are armed with global standards, they might find themselves ill-equipped to address localized issues. This gap is further accentuated by the informants' confession of a lack of in-depth sustainability education during their formative years. Many revealed that their foundational knowledge was either non-existent or superficial at best (Borg et al., 2014; Pepper & Wildy, 2008). As Žalėnienė & Pereira (2021) suggest, it is of utmost importance for educational institutions to instill a robust sustainability foundation to foster a new generation of well-informed ecopreneurs.

Interestingly, while formal education settings might fall short, ecopreneurs are not dormant. They actively seek knowledge from extracurricular sources, including seminars and workshops. This approach underscores the ever-evolving nature of sustainability practices and highlights the significance of continuous learning beyond conventional classrooms (Wals & Corcoran, 2012). However, knowledge is only one piece of the puzzle. Even as ecopreneurs arm themselves with information, they confront cultural and behavioural barriers. In many societies, sustainability remains a topic of discussion rather than action. Traditional behaviours, passed down through generations, might not always align with modern sustainability goals, emphasizing the need for a delicate balance between cultural norms and sustainability objectives (Nath, 2023). Operational complexities further muddy the waters. Sustainability is not always straightforward; it is a field riddled with trade-offs (Cavender-Bares et al., 2015;

Gibson, 2013). The study's mention of the pyrolysis process, which aids in waste management but simultaneously releases carbon dioxide, serves as a testament to this intricate dance.

The findings culminate in highlighting a significant dichotomy: the gap between sustainability awareness and action. While the interest in understanding sustainability is palpable, it does not necessarily lead to tangible changes, suggesting a need for more than just awareness. It is a call to action – to create environments that not only promote understanding but also foster actionable outcomes.

The fourth objective sought to investigate whether the study of ecopreneurship influences entrepreneurial drive. Thematic analysis identified 11 critical themes namely the lack of formal training, learning on the job, supplemental online education, social business models, university-level exposure, background in science and innovation, mixed experiences, informal and cultural learning, adaptive strategies, and funding concerns.

One striking observation from the study findings was the noticeable gap in formal ecopreneurship training. Many informants highlighted this void in their academic backgrounds, corroborating with literature that identifies a disconnect between academic curricula and practical sustainability needs (Michel, 2020). In the face of this educational gap, many informants stressed the value of experiential learning. This aligns with past research suggesting that hands-on experience is essential for entrepreneurial achievement (Woolfolk-Ruiz & Acosta-Alvarado, 2016). To fill the academic void, some, like Key Informant 1, have turned to online platforms, reflecting a broader trend of leveraging digital resources to supplement traditional education (Isaias et al., 2020).

Several informants discussed their use of social business models, illustrating a potential relationship between entrepreneurial drive and sustainable objectives (Altantsetseg et al., 2020; Omrane, 2013). Some had been introduced to related topics at university, hinting at different educational starting points. The importance of backgrounds in science and innovation was also noted, echoing the literature that champions multidisciplinary approaches to foster innovation (Herrera et al., 2016).

Interestingly, while some informants like Key Informant 4 had varied experiences, there was a common thread about the significant role of cultural and informal learning, as well as adaptive learning strategies such as consulting with experts (Starr-Glass, 2015). Financial sustainability

was also discussed, emphasizing its crucial role in startups (Kausar & Ahmad, 2020). Unanimously, all informants expressed the need for continued learning in their fields, an insight supported by existing literature (Isaias et al., 2020; Starr-Glass, 2015).

In sum, the findings shed light on the current landscape of ecopreneurship education. While formal education may not always meet the needs of budding ecopreneurs, they adapt by seeking experiential knowledge, online resources, and continuous education. There remains a distinct opportunity for academic institutions and policymakers to enhance the available resources, ensuring they are relevant and accessible, especially in middle-income countries like Ghana that may have specific educational needs.

CHAPTER FIVE
CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study sought to understand the relationship between formal ecopreneurial education and learning by doing (practice) using selected ecopreneurial firms as case studies. Four specific objectives were set to achieve the study aim. The previous chapter presented the results of the study, and discussed the findings made in light of existing literature. In this chapter, conclusions will be drawn as regards the study objectives, and recommendations made.

5.2 Conclusions

The ecopreneurial landscape, driven by the rising environmental challenges and societal shifts towards sustainable practices, circular economy, presents a multitude of factors that influence its evolution. The decision of individuals to transition from ecopreneurial studies to its practice is underpinned by a confluence of elements. Observable environmental challenges, such as climate change and plastic pollution, act as significant catalysts for initiating ecopreneurial action. At the same time, the fundamental impacts of a person's past or experiences, their passion, and the role of both formal and informal education cannot be understated. Global initiatives, most notably the Sustainable Development Goals, provide aspirational roadmaps for ecopreneurs. They are motivated not only by a sense of innovation and creativity but also by the imperative of embedding their ventures within local community contexts, ensuring socio-economic relevance.

Despite the importance of formal education, there are ecopreneurs who manage to achieve remarkable successes without being deeply rooted in theoretical knowledge. The experiential component of learning, wherein hands-on experience amalgamates with abstract conceptualization, plays a pivotal role in this success, echoing Kolb's Experiential Learning Theory. This viewpoint brings into sharp focus the concerns regarding the bureaucratic impediments that academic institutions might pose, potentially stifling innovative endeavours. Furthermore, the pace of the ever-evolving ecopreneurial sector might sometimes outstrip the corresponding academic curriculum, leading to perceived gaps in education. Nonetheless, the value of structured, formal learning is universally acknowledged, even as the importance of perpetual, real-world learning emerges as a consistent theme.

Transcending the academic realm and venturing into practical ecopreneurial activities is not devoid of challenges. A palpable disconnect exists between academic sustainability teachings and the intricate, on-ground challenges that ecopreneurs face. This disparity becomes particularly evident when ecopreneurs, equipped with global sustainability standards, grapple with localized, region-specific challenges. Moreover, a noticeable deficiency in foundational sustainability education during their formative academic years can hinder their effectiveness. Cultural norms, traditional behaviours, and operational complexities further compound these challenges, underscoring the necessity to bridge academic teachings and real-world sustainable practices.

The study of ecopreneurship and its influence on entrepreneurial drive presents a nuanced narrative. A glaring gap is evident between the formal ecopreneurial training available and the actual needs of emerging ecopreneurs. The importance of experiential learning emerges, yet again, as a cornerstone for success in the ecopreneurial domain. Several ecopreneurs, identifying the limitations of formal education, have begun to leverage digital platforms to bridge this knowledge gap. The synthesis also highlights the pivotal role of having multidisciplinary foundations, particularly in the domains of science and innovation. Despite their varied backgrounds, ecopreneurs consistently underscore the importance of informal and cultural education. As the realm of ecopreneurship continues to evolve, there's an implicit understanding among its practitioners about the necessity for continuous, adaptive learning, and the challenges of securing adequate funding.

In conclusion, while ecopreneurship presents a promising avenue for sustainable ventures, its intricate relationship with education, both formal and experiential, demands a re-evaluation and potential restructuring of academic curricula and real-world practices to better serve the next generation of ecopreneurs.

5.3 Recommendations

1. **Curriculum Re-evaluation and Integration**: Universities should review and potentially restructure their ecopreneurial programs to ensure they align with current industry requirements. Integrating real-world case studies, incorporating more experiential learning opportunities, and fostering partnerships with practicing ecopreneurs can help bridge the existing gap between academia and practice.

2. **Focus on Experiential Learning**: Universities should embrace Kolb's Experiential Learning Theory by fostering environments where students can apply theoretical knowledge in practical settings. This can be achieved through internships, field trips, and partnerships with ecopreneurial firms for hands-on projects.

3. **Localized Study Modules**: Given the disparity between global sustainability teachings and localized challenges, academic programs should offer modules focusing on regional environmental issues, integrating local cultural norms and traditional practices into their curriculum.

4. **Foundational Sustainability Education**: Universities should introduce comprehensive foundational courses in sustainability during the initial years of study to equip students with the necessary baseline knowledge. These courses should be interdisciplinary, covering science, economics, and social dimensions of sustainability.

5. **Leveraging Digital Platforms**: Institutions should integrate and promote the use of digital platforms that offer supplemental resources, courses, and forums where students can interact with practicing ecopreneurs, thus bridging the gap between formal education and real-world practices.

6. **Multidisciplinary Approach**: Ecopreneurship education should not be siloed. Collaboration between departments, especially science, technology, and innovation, can foster a holistic understanding of the ecopreneurial landscape, preparing students for the multifaceted challenges they might face.

7. **Promotion of Informal Learning**: While the importance of formal education is evident, universities should also emphasize the value of informal and cultural education. Workshops, guest lectures from practicing ecopreneurs, and cultural immersion programs can enrich the learning experience.

8. **Funding and Resource Allocation**: Institutions should provide resources and avenues for budding ecopreneurs to secure funding. This can be achieved by organizing annual investor meetings, facilitating connections with venture capitalists interested in sustainable ventures, and offering grants or competitions for innovative ecopreneurial projects.

9. **Continuous Feedback Mechanism**: Universities should establish a feedback loop with alumni who have ventured into ecopreneurship. Their insights on the relevancy and applicability of the curriculum can guide iterative improvements.

10. **Emphasize the Role of Personal Drive**: While curriculum adjustments are crucial, the role of personal passion, history, and experiences in driving ecopreneurship should be highlighted. Personal development workshops and mentoring programs can help nurture these intrinsic motivations.

In essence, stakeholders should adopt a multi-pronged approach, taking into account both the structural changes needed in university curricula and the personal dimensions of ecopreneurship. This holistic perspective will ensure that the next generation of ecopreneurs are well-equipped to handle the chances and challenges of the evolving sustainability landscape.

REFERENCES

Abidin, E. N., & Hariyono, E. (2020). Ecopreneurship-Oriented Project-Based Learning (PBL): An Approach to Enhance Students' Problem-Solving Skill. *Journal of Physics: Conference Series*, *1491*(1), 012025. https://doi.org/10.1088/1742-6596/1491/1/012025

Agarwal, R., Barney, J. B., Fiet, J., Gartner, W. B., Li, Y., Sarasvathy, S., Van de Ven, A. H., & Zahra, S. A. (2019). Advancing Theory Development in Entrepreneurship. *Academy of Management Proceedings*, *2019*(1), 13767. https://doi.org/10.5465/AMBPP.2019.13767symposium

Aghion, P., Caroli, E., & Garcia-Penalosa, C. (1999). Inequality and Economic Growth: The Perspective of the New Growth Theories. *Journal of Economic Literature*, *37*(4), 1615–1660.

Allen, J. C., & Malin, S. (2008). Green Entrepreneurship: A Method for Managing Natural Resources? *Society & Natural Resources*, *21*(9), 828–844. https://doi.org/10.1080/08941920701612917

Altantsetseg, P., Dadvari, A., Munkhdelger, T., Lkhagvasuren, G.-O., & Moslehpour, M. (2020). Sustainable Development of Entrepreneurial Orientation through Social Drivers. *Sustainability*, *12*(21), Article 21. https://doi.org/10.3390/su12218816

Aly, M., Audretsch, D. B., & Grimm, H. (2021). Emotional skills for entrepreneurial success: The promise of entrepreneurship education and policy. *The Journal of Technology Transfer*, *46*(5), 1611–1629. https://doi.org/10.1007/s10961-021-09866-1

Angrist, N., Djankov, S., Goldberg, P. K., & Patrinos, H. A. (2021). Measuring human capital using global learning data. *Nature*, *592*(7854), Article 7854. https://doi.org/10.1038/s41586-021-03323-7

Aramali, V., Sanboskani, H., Gibson, G. E., El Asmar, M., & Cho, N. (2022). Forward-Looking State-of-the-Art Review on Earned Value Management Systems: The Disconnect between Academia and Industry. *Journal of Management in Engineering*, *38*(3), 03122001. https://doi.org/10.1061/(ASCE)ME.1943-5479.0001019

Babour, R. S. (1998). Mixing qualitative methods: Quality assurance or qualitative quagmire? *Qualitative Health Research*, *8*(3), 352–361.

Barba-Sánchez, V., Mitre-Aranda, M., & Brío-González, J. del. (2022). The entrepreneurial intention of university students: An environmental perspective. *European Research on Management and Business Economics*, *28*(2), 100184. https://doi.org/10.1016/j.iedeen.2021.100184

Basilio, L., Bauer, T. K., & Kramer, A. (2017). Transferability of Human Capital and Immigrant Assimilation: An Analysis for Germany. *LABOUR*, *31*(3), 245–264. https://doi.org/10.1111/labr.12096

Battilana, J., Leca, B., & Boxenbaum, E. (2009). 2 How Actors Change Institutions: Towards a Theory of Institutional Entrepreneurship. *The Academy of Management Annals*, *3*(1), 65–107. https://doi.org/10.1080/19416520903053598

Bawakyillenuo, S., & Agbelie, I. S. K. (2021). Environmental Consciousness of Entrepreneurs in Ghana: How Do Entrepreneur Types, Demographic Characteristics and Product

Competitiveness Count? *Sustainability*, *13*(16), Article 16. https://doi.org/10.3390/su13169139

Becker, G. S. (2009). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. University of Chicago Press.

Beijer, S., Peccei, R., van Veldhoven, M., & Paauwe, J. (2021). The turn to employees in the measurement of human resource practices: A critical review and proposed way forward. *Human Resource Management Journal*, *31*(1), 1–17. https://doi.org/10.1111/1748-8583.12229

Belchior, C. C. T. L. (2023). *Ecopreneurship: Assessing what we know and what the future will bring* [masterThesis]. https://repositorio.ucp.pt/handle/10400.14/42355

Bennett, S. J. (1991). *Ecopreneuring: The Complete Guide to Small Business Opportunities from the Environmental Revolution* (1st edition). Wiley.

Berle, G. (1991). *The Green Entrepreneur: Business Opportunities That Can Save the Earth and Make You Money*. Liberty Hall Pr.

Betáková, J., Haverniková, K., Okręglicka, M., Mynarzova, M., & Magda, R. (2020). The role of universities in supporting entrepreneurial intentions of students toward sustainable entrepreneurship. *Entrepreneurship and Sustainability Issues*, *8*(1), 573–589. https://doi.org/10.9770/jesi.2020.8.1(40)

Bhatnagar, M., Taneja, S., & Özen, E. (2022). A wave of green start-ups in India—The study of green finance as a support system for sustainable entrepreneurship. *Green Finance*, *4*, 253–273. https://doi.org/10.3934/GF.2022012

Block, J. H., Halberstadt, J., Högsdal, N., Kuckertz, A., & Neergaard, H. (2023). The Future of Entrepreneurship Education and Training: Some Propositions. In J. H. Block, J. Halberstadt, N. Högsdal, A. Kuckertz, & H. Neergaard (Eds.), *Progress in Entrepreneurship Education and Training: New Methods, Tools, and Lessons Learned from Practice* (pp. 1–9). Springer International Publishing. https://doi.org/10.1007/978-3-031-28559-2_1

Blue, R. J. (1990). *Ecopreneuring: Managing for Results*. Scott Foresman Trade.

Bolan, C. M. (2003). Incorporating the Experiential Learning Theory Into the Instructional Design of Online Courses. *Nurse Educator*, *28*(1), 10.

Borg, C., Gericke, N., Höglund, H.-O., & Bergman, E. (2014). Subject- and experience-bound differences in teachers' conceptual understanding of sustainable development. *Environmental Education Research*, *20*(4), 526–551. https://doi.org/10.1080/13504622.2013.833584

Bosma, N., Hill, S., Ionescu-Somers, A., Kelley, D., Levie, J., & Tarnawa, A. (2020). *GEM Global Report 2019/2020* (pp. 1–232). Global Entrepreneurship Monitor.

Bosman, L., & Fernhaber, S. (2019). Applying Authentic Learning through Cultivation of the Entrepreneurial Mindset in the Engineering Classroom. *Education Sciences*, *9*(1), Article 1. https://doi.org/10.3390/educsci9010007

Brinckerhoff, P. C. (2000). *Social Entrepreneurship: The Art of Mission-Based Venture Development* (1st edition). Wiley.

Brown, C. J., & Proudlove, D. (2009). Business Entrepreneurs' Mindsets on Their Enterprises' Business Model. In P. Daly & D. Gijbels (Eds.), *Real Learning Opportunities at Business School and Beyond* (pp. 109–126). Springer Netherlands. https://doi.org/10.1007/978-90-481-2973-7_8

Bucholtz, M. (2000). The politics of transcription. *Journal of Pragmatics*, *32*(10), 1439–1465. https://doi.org/doi:10.1016/ S0378-2166(99)00094-6

Burns, A. C., & Bush, R. F. (2002). *Marketing research: Online research applications* (4th ed.). Prentice Hall.

Campbell, T. (1996). Technology, multimedia, and qualitative research in education. *Journal of Research on Computing in Education*, *30*(9), 122–133.

Cărăuşan, M. V. (2020). The Integration of Experiential Learning in Higher Education Institutions— An Assessment of the Romanian Universities. In *European Higher Education Area: Challenges for a New Decade* (pp. 283–297). Springer International Publishing.

Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2005). Entrepreneurial passion: The nature of emotions in entrepreneurship. *Academy of Management Proceedings*, *2005*(1), G1–G6. https://doi.org/10.5465/ambpp.2005.18778641

Cardon, M. S., Wincent, J., Singh, J., & Drnovsek, M. (2009). The nature and experience of entrepreneurial passion. *Academy of Management Review*, *34*(3), 511–532. https://doi.org/10.5465/amr.2009.40633190

Carland, J. C., & Carland, J. W. (2010). Entrepreneurship Education: Building for the Future. *Journal of Business and Entrepreneurship*, *22*, 40.

Cavender-Bares, J., Balvanera, P., King, E., & Polasky, S. (2015). Ecosystem service trade-offs across global contexts and scales. *Ecology and Society*, *20*(1). https://doi.org/10.5751/ES-07137-200122

Chankseliani, M., & McCowan, T. (2021). Higher education and the Sustainable Development Goals. *Higher Education*, *81*(1), 1–8. https://doi.org/10.1007/s10734-020-00652-w

Clont, J. G. (1992). The concept of reliability as it pertains to data from qualitative studies. *Annual Meeting of the South West Educational Research Association*.

Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, *22*(1), 29–49. https://doi.org/10.1016/j.jbusvent.2004.12.001

Colaner, N., Imanaka, J. L., & Prussia, G. E. (2018). Dialogic Collaboration across Sectors: Partnering for Sustainability. *Business and Society Review*, *123*(3), 529–564. https://doi.org/10.1111/basr.12154

Colombelli, A., & Quatraro, F. (2019). Green start-ups and local knowledge spillovers from clean and dirty technologies. *Small Business Economics*, *52*(4), 773–792. https://doi.org/10.1007/s11187-017-9934-y

Cooper, S., Bottomley, C., & Gordon, J. (2004). Stepping Out of the Classroom and up the Ladder of Learning: An Experiential Learning Approach to Entrepreneurship Education. *Industry and Higher Education*, *18*(1), 11–22. https://doi.org/10.5367/000000004773040924

Corbett, A. C. (2005). Experiential Learning within the Process of Opportunity Identification and Exploitation. *Entrepreneurship Theory and Practice*, *29*(4), 473–491. https://doi.org/10.1111/j.1540-6520.2005.00094.x

Crane, A., Matten, D., Glozer, S., & Spence, L. J. (2019). *Business Ethics: Managing Corporate Citizenship and Sustainability in the Age of Globalization*. Oxford University Press.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th edition). SAGE Publications, Inc.

Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory into Practice*, *39*(3), 124–131.

Dacin, M. T., Dacin, P. A., & Tracey, P. (2011). Social Entrepreneurship: A Critique and Future Directions. *Organization Science*, *22*(5), 1203–1213. https://doi.org/10.1287/orsc.1100.0620

Damayanti, R. W., Hartono, B., & Wijaya, A. R. (2021). Clarifying megaproject complexity in developing countries: A literature review and conceptual study. *International Journal of Engineering Business Management*, *13*, 18479790211027414. https://doi.org/10.1177/18479790211027414

Daskalopoulou, I., Karakitsiou, A., & Thomakis, Z. (2023). Social Entrepreneurship and Social Capital: A Review of Impact Research. *Sustainability*, *15*(6), 4787. https://doi.org/10.3390/su15064787

Daub, C.-H., Hasler, M., Verkuil, A. H., & Milow, U. (2020). Universities talk, students walk: Promoting innovative sustainability projects. *International Journal of Sustainability in Higher Education*, *21*(1), 97–111. https://doi.org/10.1108/IJSHE-04-2019-0149

Dauer, J. M., Lettero, C., & Ocana, M. (2011). *A Review of Ethical Concepts and Moral Reasoning Integration into Climate Change Curriculum*. https://www.semanticscholar.org/paper/A-Review-of-Ethical-Concepts-and-Moral-Reasoning-Dauer-Lettero/ae22714931311e1e42fbf57c6327a47747d6d166

Davies, D., & Dodd, J. (2002). Qualitative research and the question of rigor. *Qualitative Health Research*, *12*(2), 279–289.

Deakins, D., & Scott, J. M. (Eds.). (2021). *Entrepreneurship: A contemporary and global approach*. SAGE Publications.

Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, *22*(1), 50–76. https://doi.org/10.1016/j.jbusvent.2005.09.003

DeJonckheere, M., & Vaughn, L. M. (2019). Semistructured interviewing in primary care research: A balance of relationship and rigour. *Family Medicine and Community Health*, *7*(2), e000057. https://doi.org/10.1136/fmch-2018-000057

Desa, G., & Kotha, S. (2006). *Technology social ventures and innovation: Understanding the innovation process at Benetech* [Meeting]. Academy of Management Meeting, Atlanta.

Dhekra, B. A., & Chen, H. (2022). Driving factors for eco-innovation orientation: Meeting sustainable growth in Tunisian agribusiness. *International Entrepreneurship and Management Journal*, *18*(2), 713–732. https://doi.org/10.1007/s11365-021-00792-0

Downing, S. (2005). The Social Construction of Entrepreneurship: Narrative and Dramatic Processes in the Coproduction of Organizations and Identities. *Entrepreneurship Theory and Practice*, *29*(2), 185–204. https://doi.org/10.1111/j.1540-6520.2005.00076.x

Drucker, P. (1985). *Innovation and Entrepreneurship: Practice and Principles*. Harper & Row.

Eckhardt, J., & Wetherbe, J. C. (2016). Connecting Business Research to Practice. *Entrepreneur and Innovation Exchange*. https://doi.org/10.17919/X9NK54

Eisner, E. W. (1991). *The enlightened eye: Qualitative inquiry and the enhancement of educational practice*. Macmillan Publishing Company.

El Arhlabi, Z. (2021). *The development of human capital through organisational change and motivation* [Post-Print]. HAL. https://econpapers.repec.org/paper/haljournl/hal-03312407.htm

Elshof, L. (2014). *Eco-Technological Literacy for Resiliency* (J. R. Dakers, Ed.; pp. 91–102). Palgrave Macmillan US. https://doi.org/10.1057/9781137394750_7

Etzkowitz, H., Webster, A., Gebhardt, C., & Terra, B. R. C. (2000). The future of the university and the university of the future: Evolution of ivory tower to entrepreneurial paradigm. *Research Policy*, *29*(2), 313–330. https://doi.org/10.1016/S0048-7333(99)00069-4

Farrinelli, F., Bottini, M., Akkoyunlu, S., & Aern, P. (2011). Green entrepreneurship: The missing link towards a greener economy. *African Technology Development Forum Journal*, *8*(3/4), 42–48.

Ferns, G. (2019). Thinking Globally, Teaching Sustainability: Embedding Sustainability in International Business Studies and Addressing Student Responses. In K. Amaeshi, J. N. Muthuri, & C. Ogbechie (Eds.), *Incorporating Sustainability in Management Education: An Interdisciplinary Approach* (pp. 83–104). Springer International Publishing. https://doi.org/10.1007/978-3-319-98125-3_5

Fichter, K., Geier, J., & Tiemann, I. (2016). *Good practice collection University support for sustainable entrepreneurship* (pp. 1–28). Support Systems for Sustainable Entrepreneurship and Transformation (SHiFT).

Fruchterman, J. (2008). Developing Information Technology to Meet Social Needs (*Innovations Case Narrative*: Benetech). *Innovations: Technology, Governance, Globalization*, *3*(3), 83–99. https://doi.org/10.1162/itgg.2008.3.3.83

Fryer, M. (2016). A Role for Ethics Theory in Speculative Business Ethics Teaching. *Journal of Business Ethics*, *138*(1), 79–90. https://doi.org/10.1007/s10551-015-2592-6

Gibb, A. (2002). In pursuit of a new 'enterprise' and 'entrepreneurship' paradigm for learning: Creative destruction, new values, new ways of doing things and new combinations of knowledge. *International Journal of Management Reviews*, *4*(3), 233–269. https://doi.org/10.1111/1468-2370.00086

Gibbs, D. (2006). Sustainability Entrepreneurs, Ecopreneurs and the Development of a Sustainable Economy. *Greener Management International*, *55*, 63–78.

Gibbs, G. R. (2007). *Analysing qualitative data*. Sage.

Gibson, R. B. (2013). Avoiding sustainability trade-offs in environmental assessment. *Impact Assessment and Project Appraisal*, *31*(1), 2–12. https://doi.org/10.1080/14615517.2013.764633

Glesne, C., & Peshkin, P. (1992). *Becoming qualitative researches: An introduction*. Longman.

Golfashani, N. (2003). Understanding Reliability and Validity in Qualitative Research. *The Qualitative Report*, *8*(4), 597–607.

Grayson, D., & Hodges, A. (2004). *Corporate social opportunity! Seven steps to make corporate social responsibility work for your business*. Greenleaf Publishing.

Grimm, J. H., Hofstetter, J. S., & Sarkis, J. (2023). Corporate sustainability standards in multi-tier supply chains – an institutional entrepreneurship perspective. *International Journal of Production Research*, *61*(14), 4702–4724. https://doi.org/10.1080/00207543.2021.2017053

Gruzina, Y., Firsova, I., & Strielkowski, W. (2021). Dynamics of Human Capital Development in Economic Development Cycles. *Economies*, *9*(2), Article 2. https://doi.org/10.3390/economies9020067

Guba, E. G., & Lincoln, Y. S. (1994). Competing Paradigms in Qualitative Research. In *Handbook of Qualitative Research* (pp. 105–117).

Guerra, C., Capitelli, M., & Longo, S. (2012). The role of paradigms in science: A historical perspective. In L. L'Abate (Ed.), *Paradigms in Theory Construction: Vol. XIV* (pp. 19–30). Springer. https://doi.org/10.1007/978-1-4614-0914-4

Guleria, D., & Kaur, G. (2022). Motivation for Ecopreneurial Behavior (MEB): Scale Development and Validation. *SAGE Open*, *12*(2), 215824402210995. https://doi.org/10.1177/21582440221099512

Gunawan, A. A., Essers, C., & van Riel, A. C. R. (2020). The adoption of ecopreneurship practices in Indonesian craft SMEs: Value-based motivations and intersections of identities. *International Journal of Entrepreneurial Behavior & Research*, *27*(3), 730–752. https://doi.org/10.1108/IJEBR-06-2020-0404

Hagebakken, G., Reimers, C., & Solstad, E. (2021). Entrepreneurship Education as a Strategy to Build Regional Sustainability. *Sustainability*, *13*(5), Article 5. https://doi.org/10.3390/su13052529

Halcomb, E. J., & Davidson, P. M. (2006). Is verbatim transcription of interview data always necessary? *Applied Nursing Research*, *19*(1), 38–42. https://doi.org/oi: 10.1016/j.apnr.2005.06.001

Hald, K. S., & Olsen, M. A. (2010). Supplier incentives to invest in buyer promoted sustainability activities in the supply chain. *17th International Annual EurOMA Conference*.

Hanifah, H., Abdul Halim, H., Ahmad, N. H., & Vafaei-Zadeh, A. (2019). Emanating the key factors of innovation performance: Leveraging on the innovation culture among SMEs in Malaysia. *Journal of Asia Business Studies*, *13*(4), 559–587. https://doi.org/10.1108/JABS-04-2018-0130

Harte, P., Peisl, T., & Kammers, K. (2020). Motivations of Ecopreneurs: The New Entrepreneurial Paradigm. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3757957

Healy, M., & Perry, C. (2000). Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm. *Qualitative Market Research*, *3*(3).

Hennink, M. H., Hutter, I., & Bailey, A. (2011). *Qualitative research methods*. SAGE Publications Ltd.

Herrera, E. W. (2021). Institutional entrepreneurship in sustainability: The need for radical change processes in private organizations and management schools. In *The Role of Law in Governing Sustainability*. Routledge.

Herrera, F., Guerrero, M., & Urbano, D. (2016). Interconnectivity between academic organizations and established firms for a strategic and knowledge fostering purpose: An exploratory study in an emerging economy. In *Knowledge Spillover-based Strategic Entrepreneurship* (1st ed.). Routledge.

Hockerts, K., & Wüstenhagen, R. (2010). Greening Goliaths versus emerging Davids—Theorizing about the role of incumbents and new entrants in sustainable entrepreneurship. *Journal of Business Venturing*, *25*(5), 481–492. https://doi.org/10.1016/j.jbusvent.2009.07.005

Hoepfl, M. C. (1997). Choosing qualitative research: A primer for technology education researchers. *Journal of Technology Education*, *9*(1), 47–63.

Holt, D. (2011). Where are they now? Tracking the longitudinal evolution of environmental businesses from the 1990s. *Business Strategy and the Environment*, *20*(4), 238–250. https://doi.org/10.1002/bse.697

Hooley, T. (2021). Career development and Human Capital Theory: Preaching the "Education Gospel." In P. J. Robertson, T. Hooley, & P. McCash (Eds.), *The Oxford Handbook of Career Development*. Oxford University Press.

Hurst, D., MacDougall, S., & Pelham, C. (2008). Aligning personal and entrepreneurial vision for success: The entrepreneur counseling model of the Acadia Centre for Social and Business Entrepreneurship. *Journal of Enterprising Communities: People and Places in the Global Economy*, *2*(4), 367–386. https://doi.org/10.1108/17506200810913926

IPCC. (2014). *Climate Change 2014: Synthesis Report.* Intergovernmental Panel on Climate Change. https://archive.ipcc.ch/report/ar5/syr/

Isaias, P., Sampson, D. G., & Ifenthaler, D. (Eds.). (2020). *Online Teaching and Learning in Higher Education*. Springer International Publishing. https://doi.org/10.1007/978-3-030-48190-2

Johnson, B. R. (1997). Examining the validity structure of qualitative research. *Education*, *118*(3), 282–292.

Jones, C., Parker, M., & Bos, R. ten. (2005). *For Business Ethics*. Routledge.

Juma, N., Olabisi, J., & Griffin-EL, E. (2023). External enablers and entrepreneurial ecosystems: The brokering role of the anchor tenant in capacitating grassroots ecopreneurs. *Strategic Entrepreneurship Journal*, *17*(2), 372–407. https://doi.org/10.1002/sej.1462

Karimi, S. (2020). The role of entrepreneurial passion in the formation of students' entrepreneurial intentions. *Applied Economics*, *52*(3), 331–344. https://doi.org/10.1080/00036846.2019.1645287

Kausar, A., & Ahmad, M. A. (2020). *A Study on Financial Literacy Creating Sustainable Startups in the Indian Context* (SSRN Scholarly Paper 3743670). https://doi.org/10.2139/ssrn.3743670

Kennedy, S., & Rood, E. (2017). Eco-transformation: A global sustainability wake-up call. *RSM Discovery - Management Knowledge*. https://www.semanticscholar.org/paper/Eco-transformation%3A-a-global-sustainability-wake-up-Kennedy-Rood/2b68050c51ee074dfc597aa458c321d77546fdf9

Kim, J., & Park, C.-Y. (2020). Education, skill training, and lifelong learning in the era of technological revolution: A review. *Asian-Pacific Economic Literature*, *34*(2), 3–19. https://doi.org/10.1111/apel.12299

Kirby, D. A. (2004). Entrepreneurship education: Can business schools meet the challenge? *Education + Training*, *46*(8/9), 510–519. https://doi.org/10.1108/00400910410569632

Kirkwood, J., & Walton, S. (2014). How green is green? Ecopreneurs balancing environmental concerns and business goals. *Australasian Journal of Environmental Management*, *21*(1), 37–51. https://doi.org/10.1080/14486563.2014.880384

Kitchenham, B., & Pfleeger, S. L. (2002). Principles of Survey Research Part 5: Populations and Samples. *ACM SIGSOFT Software Engineering Notes*, *27*(5), 17–20. https://doi.org/10.1145/571681.571686

Kolb, A., & Kolb, D. (2006). Learning styles and learning spaces: A review of the multidisciplinary application of experiential learning theory in higher education. *Learning Styles and Learning: A Key to Meeting the Accountability Demands in Education*, 45–91.

Kolb, A. Y., & Kolb, D. A. (2017). Experiential Learning Theory as a Guide for Experiential Educators in Higher Education. *Experiential Learning and Teaching in Higher Education*, *1*(1), Article 1. https://doi.org/10.46787/elthe.v1i1.3362

Kolb, D. A. (2014). *Experiential Learning: Experience as the Source of Learning and Development*. FT Press.

Kozlinska, I. (2011). Contemporary approaches to entrepreneurship education. *JOURNAL OF BUSINESS MANAGEMENT*, *4*. https://journals.riseba.eu/index.php/jbm/article/view/218

Kundu, S. C., & Rani, S. (2016). Female aspirant human resources' entrepreneurial orientation: A study in Indian context. *Management Research Review*, *39*(2), 235–263. https://doi.org/10.1108/MRR-11-2015-0267

Kuzminov, Y., Sorokin, P., & Froumin, I. (2019). Generic and Specific Skills as Components of Human Capital: New Challenges for Education Theory and Practice. *Форсайт*, *13*(2 (eng)), Article 2 (eng).

Lackéus, M. (2015). *Entrepreneurship in Education* (pp. 1–45). OECD. https://www.oecd.org/cfe/leed/BGP_Entrepreneurship-in-Education.pdf

Lakhanpal, S., Singh, M., & Choudhury, R. A. (2023). A Surge in Green Start-Ups in India: The Study of Sustainable Start-Up Ecosystem Powered by Green Finance. In K. Sen, S. Routray, N. Mitra, Y. Braña, & G. Ćorić (Eds.), *Diversity and Inclusion in the Start-Up Ecosystem* (pp. 35–44). Springer Nature. https://doi.org/10.1007/978-981-99-5366-0_3

Lehmann, M., Christensen, P., & Larsen, J. M. (2003). *Self-Regulation and New Institutions: 11th Greening of Industry Network Conference, October 12-15 2003*.

Leoni, S. (2023). A Historical Review of the Role of Education: From Human Capital to Human Capabilities. *Review of Political Economy*, *0*(0), 1–18. https://doi.org/10.1080/09538259.2023.2245233

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE Publications.

Lowe, N. R. (2021). *An Analysis of the Benefits of Experiential Learning Within Business Schools* [Thesis]. Appalachian State University.

Lundqvist, M. A., & Middleton, K. L. W. (2013). Academic entrepreneurship revisited – university scientists and venture creation. *Journal of Small Business and Enterprise Development*, *20*(3), 603–617. https://doi.org/10.1108/JSBED-04-2013-0059

Mair, J., & Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business*, *41*(1), 36–44. https://doi.org/10.1016/j.jwb.2005.09.002

Marginson, S. (2019). Limitations of human capital theory. *Studies in Higher Education*, *44*(2), 287–301. https://doi.org/10.1080/03075079.2017.1359823

Mason, P. (2014). Chapter 3: Research Philosophy and Research Design. In *Researching Tourism ,Leisure and Hospitality for your dissertation* (pp. 50–52). https://doi.org/10.1007/978-3-319-15135-9_4

McCarthy, M. (2010). Experiential Learning Theory: From Theory To Practice. *Journal of Business & Economics Research (JBER)*, *8*(5), Article 5. https://doi.org/10.19030/jber.v8i5.725

McDowell, W. C., Matthews, L. M., Matthews, R. L., Aaron, J. R., Edmondson, D. R., & Ward, C. B. (2019). The price of success: Balancing the effects of entrepreneurial commitment, work-family conflict and emotional exhaustion on job satisfaction. *International Entrepreneurship and Management Journal*, *15*(4), 1179–1192. https://doi.org/10.1007/s11365-019-00581-w

McFadden, G., & Wells, J. (2016). Tax Policy's Role in Promoting Sustainability. In G. A. Uzochukwu, K. Schimmel, V. Kabadi, S.-Y. Chang, T. Pinder, & S. A. Ibrahim (Eds.), *Proceedings of the 2013 National Conference on Advances in Environmental Science and Technology* (pp. 241–247). Springer International Publishing. https://doi.org/10.1007/978-3-319-19923-8_25

Mellander, C., & Florida, R. (2021). The Rise of Skills: Human Capital, the Creative Class, and Regional Development. In M. M. Fischer & P. Nijkamp (Eds.), *Handbook of Regional Science* (pp. 707–719). Springer. https://doi.org/10.1007/978-3-662-60723-7_18

Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education. Revised and Expanded from "Case Study Research in Education."* Jossey-Bass Publishers.

Michel, J. O. (2020). Mapping out Students' Opportunity to Learn about Sustainability across the Higher Education Curriculum. *Innovative Higher Education*, *45*(5), 355–371. https://doi.org/10.1007/s10755-020-09509-7

Miller, T. L., Grimes, M. G., McMullen, J. S., & Vogus, T. J. (2012). Venturing for Others with Heart and Head: How Compassion Encourages Social Entrepreneurship. *Academy of Management Review*, *37*(4), 616–640. https://doi.org/10.5465/amr.2010.0456

Minniti, M., & Lévesque, M. (2008). Recent developments in the economics of entrepreneurship. *Journal of Business Venturing*, *23*(6), 603–612. https://doi.org/10.1016/j.jbusvent.2008.01.001

Morley, D. A., & Jamil, M. G. (2021). Introduction: Real World Learning—Recalibrating the Higher Education Response Towards Application to Lifelong Learning and Diverse Career Paths. In D. A. Morley & M. G. Jamil (Eds.), *Applied Pedagogies for Higher Education: Real World Learning and Innovation across the Curriculum* (pp. 1–17). Springer International Publishing. https://doi.org/10.1007/978-3-030-46951-1_1

Mosey, S., Guerrero, M., & Greenman, A. (2016). Technology Entrepreneurship Research Opportunities: Insights from across Europe. *The Journal of Technology Transfer*, *37*(1), 144–161.

Moustakas, C. (1994). *Phenomenological research methods*. SAGE Publications.

Muff, K. (2013). Developing globally responsible leaders in business schools: A vision and transformational practice for the journey ahead. *Journal of Management Development*, *32*(5), 487–507. https://doi.org/10.1108/02621711311328273

Muñoz, P., & Cohen, B. (2017). Mapping out the sharing economy: A configurational approach to sharing business modeling. *Technological Forecasting and Social Change*, *125*, 21–37.

Nath, S. (2023). Tales, Toys, and Traditions: Enacting a Culture of Sustainable Lifestyles. *Childhood Education*, *99*(4), 24–31. https://doi.org/10.1080/00094056.2023.2232278

Nayak, M., & Narayan, K. A. (2019). *Strengths and Weakness of Online Surveys*. *24*, 31–38. https://doi.org/10.9790/0837-2405053138

Neck, H. M., & Greene, P. G. (2011). Entrepreneurship Education: Known Worlds and New Frontiers. *Journal of Small Business Management*, *49*(1), 55–70. https://doi.org/10.1111/j.1540-627X.2010.00314.x

Nga, J. K. H., & Shamuganathan, G. (2010). The Influence of Personality Traits and Demographic Factors on Social Entrepreneurship Start Up Intentions. *Journal of Business Ethics*, *95*(2), 259–282. https://doi.org/10.1007/s10551-009-0358-8

Nicolopoulou, K., Karatas-Ozkan, M., Janssen, F., & Jermier, J. (Eds.). (2018). *Sustainable Entrepreneurship and Social Innovation* (1st ed.). Routledge. https://www.routledge.com/Sustainable-Entrepreneurship-and-Social-Innovation/Nicolopoulou-Karatas-Ozkan-Janssen-Jermier/p/book/9781138625778

Norris, N. (1997). Error, bias and validity in qualitative research. *Educational Action Research*, *5*(1), 172–176. https://doi.org/10.1080/09650799700200020

Oliver, D. G., Serovich, J. M., & Mason, T. L. (2005). Constraints and opportunities with interview transcription: Towards reflection in qualitative research. *Social Forces*, *84*(2), 1273–1289. https://doi.org/10.1353/ sof.2006.0023

Omrane, A. (2013). *Social Entrepreneurship and Sustainable Development: The Role of Business Models* (SSRN Scholarly Paper 2232438). https://doi.org/10.2139/ssrn.2232438

Osiobe, E. U. (2019). A Literature Review of Human Capital and Economic Growth. *Business and Economic Research*, *9*(4), 179. https://doi.org/10.5296/ber.v9i4.15624

Owoseni, A., & Twinomurinzi, H. (2019). The dynamic capabilities of small and medium-scale enterprises using mobile apps in Lagos, Nigeria. J Info Sys Dev Countries, 85(e12061), 1–14. https://doi.org/10.1002/isd2.12061

Pacheco, D., Dean, T., & Payne, D. (2010). Escaping the Green Prison: Entrepreneurship and the Creation of Opportunities for Sustainable Development. *Journal of Business Venturing*, *25*, 464–480. https://doi.org/10.1016/j.jbusvent.2009.07.006

Parrish, B. D. (2010). Sustainability-driven entrepreneurship: Principles of organization design. *Journal of Business Venturing*, *25*(5), 510–523. https://doi.org/10.1016/j.jbusvent.2009.05.005

Parrish, B. D., & Foxon, T. J. (2006). Sustainability Entrepreneurship and Equitable Transitions to a Low-Carbon Economy. *Greener Management International*, *55*, 47–62.

Patton, M. Q. (2002). *Qualitative evaluation and research methods* (3rd ed.). Sage Publications, Inc.

Peattie, K. (2001). Towards Sustainability: The Third Age of Green Marketing. *The Marketing Review*, *2*(2), 129–146. https://doi.org/10.1362/1469347012569869

Pecorari, P. M., & Lima, C. R. C. (2020). Analysis of Eco-Innovation from a Business Perspective. *Revista Produção Online*, *20*(3), 792–810. https://doi.org/10.14488/1676-1901.v20i3.3423

Pepper, C., & Wildy, H. (2008). Leading for sustainability: Is surface understanding enough? *Journal of Educational Administration*, *46*(5), 613–629. https://doi.org/10.1108/09578230810895528

Perrini, F. (2006). *The New Social Entrepreneurship: What Awaits Social Entrepreneurial Ventures?* Edward Elgar Publishing.

Pfeffer, J., & Fong, C. T. (2002). The End of Business Schools? Less Success Than Meets the Eye. *Academy of Management Learning & Education*, *1*(1), 78–95. https://doi.org/10.5465/amle.2002.7373679

Pittaway, L., & Cope, J. (2007). Entrepreneurship Education: A Systematic Review of the Evidence. *International Small Business Journal*, *25*(5), 479–510. https://doi.org/10.1177/0266242607080656

Pittaway, L., Henry, C., Kirby, D., & Thompson, J. (2023). *The History of Entrepreneurship Education in the United Kingdom, 1860-2020* (SSRN Scholarly Paper 4318025). https://doi.org/10.2139/ssrn.4318025

Piwowar-Sulej, K., Krzywonos, M., & Kwil, I. (2021). Environmental entrepreneurship – Bibliometric and content analysis of the subject literature based on H-Core. *Journal of Cleaner Production*, *295*, 126277. https://doi.org/10.1016/j.jclepro.2021.126277

Potluri, S., & Phani, B. V. (2020). Incentivizing green entrepreneurship: A proposed policy prescription (a study of entrepreneurial insights from an emerging economy perspective). *Journal of Cleaner Production*, *259*, 120843. https://doi.org/10.1016/j.jclepro.2020.120843

Prado, N. B. D., Moraes, G., Fischer, B. B., Anholon, R., & Rampasso, I. S. (2022). Antecedents of environmental value creation: An analysis with ecopreneurs in a developing country. *International Journal of Sustainable Development & World Ecology*, *29*(8), 709–724. https://doi.org/10.1080/13504509.2022.2080296

Prahalad, C. K. (2004). *The Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits* (First Edition). Wharton School Publishing.

Rae, D. (2006). Entrepreneurial learning: A conceptual framework for technology-based enterprise. *Technology Analysis & Strategic Management*, *18*(1), 39–56. https://doi.org/10.1080/09537320500520494

Rajasekar, S., Philominathan, P., & Chinnathambi, V. (2013). *Research methodology*. *November 2013*, 1–54.

Rodríguez-García, M., Guijarro-García, M., & Carrilero-Castillo, A. (2019). An Overview of Ecopreneurship, Eco-Innovation, and the Ecological Sector. *Sustainability*, *11*(10), Article 10. https://doi.org/10.3390/su11102909

Sachs, J. D. (2015). *The Age of Sustainable Development* (p. 544 Pages). Columbia University Press.

Sanchez, T. (2022). Saddling Up for Success: Rope or Wrangle? Comparing Experiential Learning Programs for Developing Emotional Intelligence in the Workplace. *Dissertations from the Executive Doctorate in Business Administration Program*. https://scholarship.rollins.edu/dba_dissertations/43

Sarasvathy, S. D. (2009). *Effectuation: Elements of Entrepreneurial Expertise*. Edward Elgar Publishing.

Sarkar, S., & Pansera, M. (2017). Sustainability-driven innovation at the bottom: Insights from grassroots ecopreneurs. *Technological Forecasting and Social Change*, *114*, 327–338. https://doi.org/10.1016/j.techfore.2016.08.029

Sasongko, S., & Anggadwita, G. (2016). Ecopreneurship Implementation for Environment and Economic Sustainability. *Proceedings of the 2016 Global Conference on Business, Management and Entrepreneurship*. 2016 Global Conference on Business, Management and Entrepreneurship, Bandung, Indonesia. https://doi.org/10.2991/gcbme-16.2016.139

Saunders, M. N. K., Lewis, P., Thornhill, A., & Bristow, A. (2015). Understanding research philosophy and approaches to theory development. In M. N. K. Saunders, P. Lewis, & A. Thornhill (Eds.), *Research Methods for Business Students* (pp. 122–161). Pearson Education. http://catalogue.pearsoned.co.uk/educator/product/Research-Methods-for-Business-Students/9781292016627.page

Schaltegger, S. (2002). A Framework for Ecopreneurship: Leading Bioneers and Environmental Managers to Ecopreneurship. *Greener Management International*, *38*, 45–58.

Schaltegger, S., & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: Categories and interactions. *Business Strategy and the Environment*, *20*(4), 222–237. https://doi.org/10.1002/bse.682

Schaper, M. (2002). Introduction: The Essence of Ecopreneurship. *Greener Management International*, *38*, 26–30.

Schmitz, C. L., Stinson, C. H., & James, C. D. (2019). Community and Environmental Sustainability. *Critical Social Work*, *11*(3). https://doi.org/10.22329/csw.v11i3.5834

Schneider, N. R. (2019). *Exploring ecopreneurship: An examination of business practices in pursuit of sustainability goals on a firm and supply chain level* [Ph.D., University of Bristol]. https://research-information.bris.ac.uk/en/studentTheses/10e47cb9-7e22-4b9f-9aa7-c63d7e32187c

Schumpeter, J., & Backhaus, U. (2003). The Theory of Economic Development. In J. Backhaus (Ed.), *Joseph Alois Schumpeter: Entrepreneurship, Style and Vision* (pp. 61–116). Springer US. https://doi.org/10.1007/0-306-48082-4_3

Seale, C. (1999). Quality in qualitative research. *Qualitative Inquiry*, *5*(4), 465–478.

Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*, *16*(15), 1699–1710. https://doi.org/10.1016/j.jclepro.2008.04.020

Shepherd, D. A., & Patzelt, H. (2011). The New Field of Sustainable Entrepreneurship: Studying Entrepreneurial Action Linking "What is to be Sustained" with "What is to be Developed." *Entrepreneurship Theory and Practice*, *35*(1), 137–163. https://doi.org/10.1111/j.1540-6520.2010.00426.x

Shrivastava, P. (2014). Special volume on Organizational Creativity and Sustainability. *Journal of Cleaner Production*, *79*, 4–6. https://doi.org/10.1016/j.jclepro.2014.06.015

Sica, E. (2016). Financial Constraints and Multilevel Perspective: The Case of the Italian Manufacturing Enterprises. *Journal of Modern Accounting and Auditing*, *12*(2). https://doi.org/10.17265/1548-6583/2016.02.004

Sileyew, K. J. (2020). Research design and Methodology. In E. Abu-Taieh, I. H. A. Hadid, & A. E. Mouatasim (Eds.), *Cyberspace* (pp. 27–37). BoD – Books on Demand.

Singh, A., & Panackal, N. (2015). Youth Ecopreneurship: A Key for Success of First Generation Entrepreneurs. *Annual Research Journal of Symbiosis Centre for Management Studies*, *2*(1), 1–13.

Sodirjonov, M. M. (2020). Education as the Most Important Factor of Human Capital Development. *Theoretical & Applied Science*, *4 (84)*, 901–905. https://doi.org/10.15863/TAS.2020.04.84.161

Soomro, B. A., K. Almahdi, H., & Shah, N. (2020). Perceptions of young entrepreneurial aspirants towards sustainable entrepreneurship in Pakistan. *Kybernetes*, *50*(7), 2134–2154. https://doi.org/10.1108/K-07-2019-0504

Starr-Glass, D. (2015). Making Sense of Surrounding Difference: Informal Learning in National Culture Adaptation. In O. Mejiuni, P. Cranton, & O. Táíwò (Eds.), *Measuring and Analyzing Informal Learning in the Digital Age* (making-sense-of-surrounding-difference; pp. 198–214). IGI Global. https://doi.org/10.4018/978-1-4666-8265-8.ch014

Stenbacka, C. (2001). Qualitative research requires quality concepts of its own. *Management Decision*, *39*(7), 551–555.

Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. In *Basics of qualitative research: Grounded theory procedures and techniques*. Sage Publications, Inc.

Strydom, C., Meyer, N., & Synodinos, C. (2021). South African Generation Y students' intention towards ecopreneurship. *Acta Commercii*, *21*(1), 1–12. https://doi.org/10.4102/ac.v21i1.910

Stubbs, W. (2017). Sustainable Entrepreneurship and B Corps. *Business Strategy and the Environment*, *26*(3), 331–344. https://doi.org/10.1002/bse.1920

Stubbs, W., & Cocklin, C. (2008). Conceptualizing a "Sustainability Business Model." *Organization & Environment*, *21*(2), 103–127. https://doi.org/10.1177/1086026608318042

Suddaby, R., Israelsen, T., Robert Mitchell, J., & Lim, D. S. K. (2023). Entrepreneurial Visions as Rhetorical History: A Diegetic Narrative Model of Stakeholder Enrollment. *Academy of Management Review*, *48*(2), 220–243. https://doi.org/10.5465/amr.2020.0010

Sule, T., & Ntawigaya, N. (2021). *The Role of Higher Education on Graduates' Self-Employment in Tanzania's Industrial Era: A Need for Reviewing Educational Curricular*. *1*, 45–52.

Suparno, Wibowo, A., Herlitah, Mukhtar, S., Kusumojanto, D. D., Suwatno, Narmaditya, B. S., & Raudah, M. (2019). Do Entrepreneurial Education and Training Impact on Entrepreneurial Skills-Based Ecopreneurship? *Humanities and Social Sciences Letters*, *7*(4), Article 4. https://doi.org/10.18488/journal.73.2019.74.246.253

Terán-Yépez, E., Marín-Carrillo, G. M., Casado-Belmonte, M. del P., & Capobianco-Uriarte, M. de las M. (2020). Sustainable entrepreneurship: Review of its evolution and new trends. *Journal of Cleaner Production*, *252*, 119742. https://doi.org/10.1016/j.jclepro.2019.119742

Thurman, P. W., & Halkias, D. (2017). *Entrepreneurship and Sustainability: Business Solutions for Poverty Alleviation from Around the World* (1st ed.). Routledge. https://www.routledge.com/Entrepreneurship-and-Sustainability-Business-Solutions-for-Poverty-Alleviation/Thurman-Halkias/p/book/9781138108998

Tiana, S. A., Fernández Morilla, M., Mallarach Carrera, J. M., & Vidal Ramèntol, S. (2017). Barreras para la sostenibilidad integral en la Universidad. *Revista Iberoamericana de Educación*, *73*, 253–272. https://doi.org/10.35362/rie730301

Tilley, F., & Parrish, B. D. (2006). From poles to wholes: Facilitating an integrated approach to sustainable entrepreneurship. *World Review of Entrepreneurship, Management and Sustainable Development*. https://www.inderscienceonline.com/doi/10.1504/WREMSD.2006.010214

Tilley, F., & Young, W. (2006). Sustainability Entrepreneurs: Could They Be the True Wealth Generators of the Future? *Greener Management International*, *55*, 79–92.

Vanderheiden, G. (2008). Lessons for Social Entrepreneurs… and for their Benefactors (*Innovations Case Discussion*: Benetech). *Innovations: Technology, Governance, Globalization*, *3*(3), 100–104. https://doi.org/10.1162/itgg.2008.3.3.100

Varii, A. (2023). *7th Virtual International Conference on Education, Innovation and ICT* (Red de Investigación e Innovación Educativa (REDINE), Ed.). Adaya Press. https://doi.org/10.58909/adc22447986

Varpio, L., Paradis, E., Uijtdehaage, S., & Young, M. (2020). The Distinctions Between Theory, Theoretical Framework, and Conceptual Framework. *Academic Medicine*, *95*(7), 989–994. https://doi.org/10.1097/ACM.0000000000003075

Vladimirovna, D. N., Ivanovna, A. A., Nikolaevna, S.-K. Y., & Urban, O. A. (2020). Conceptual Framework To Study Human Capital In Territorial And Interdisciplinary Dimensions. *European Proceedings of Social and Behavioural Sciences*, *Social and Cultural Transformations in the Context of Modern Globalism» Dedicated to the 80th Anniversary of Turkayev Hassan Vakhitovich*. https://doi.org/10.15405/epsbs.2020.10.05.462

Wals, A. E. J., & Corcoran, P. B. (Eds.). (2012). Learning for sustainability in times of accelerating change. In *Learning for sustainability in times of accelerating change*. Wageningen Academic. https://brill.com/edcollbook/title/68734

Wals, A. E. J., & Jickling, B. (2002). "Sustainability" in higher education: From doublethink and newspeak to critical thinking and meaningful learning. *International Journal of Sustainability in Higher Education*, *3*(3), 221–232. https://doi.org/10.1108/14676370210434688

Wellsandt, S., Thoben, K.-D., & Klein, P. (2018). *Information Feedback in Product Development: Analysing Practical Cases*. 1745–1756. https://doi.org/10.21278/idc.2018.0379

Winter, G. (2000). A comparative discussion of the notion of validity in qualitative and quantitative research. *The Qualitative Report*, *4*(3), 1–14.

Wolfe, M. T., & Shepherd, D. A. (2015). "Bouncing Back" from a Loss: Entrepreneurial Orientation, Emotions, and Failure Narratives. *Entrepreneurship Theory and Practice*, *39*(3), 675–700. https://doi.org/10.1111/etap.12057

Woolfolk-Ruiz, D. E., & Acosta-Alvarado, M. (2016). *Experiential Activities: A Tool to Increase Entrepreneurial Skills* (M. Peris-Ortiz, J. A. Gómez, F. Vélez-Torres, & C. Rueda-Armengot, Eds.). Springer International Publishing. https://doi.org/10.1007/978-3-319-24657-4_12

Yi, G. (2021). From green entrepreneurial intentions to green entrepreneurial behaviors: The role of university entrepreneurial support and external institutional support. *International Entrepreneurship and Management Journal*, *17*(2), 963–979. https://doi.org/10.1007/s11365-020-00649-y

York, J. G., Sarasvathy, S. D., & Wicks, A. C. (2013). An Entrepreneurial Perspective on Value Creation in Public-Private Ventures. *Academy of Management Review*, *38*(2), 307–309. https://doi.org/10.5465/amr.2012.0097

Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing*, *24*(5), 519–532. https://doi.org/10.1016/j.jbusvent.2008.04.007

Žalėnienė, I., & Pereira, P. (2021). Higher Education For Sustainability: A Global Perspective. *Geography and Sustainability*, *2*(2), 99–106. https://doi.org/10.1016/j.geosus.2021.05.001

THE APPENDICES

APPENDIX A: The Informed Consent Form

(The form for research participant's authorization)

Purpose: The study is conducted only for academic credit and is intended to support the completion of a thesis for the Master of Science in Global Management programme at Nord University, Norway

The research project title: ***ECOPRENEURSHIP AS AN OUTCOME OF UNIVERSITY STUDY OR AS A PRODUCT OF LEARNING BY DOING (PRACTICE) – A CASE STUDY OF SELECTED ECOPRENEURIAL FIRMS***

1. I ……………………………………………… hereby freely consent to be involved in the research as described to me by

………………..…………………………………………………………………..

2. I have been given an explanation of the nature, purpose and potential ramifications, and I understand them.

3. I am aware of my right to decline participation in the study and that any information I choose to provide will be treated in confidence. I am aware that publishing may be done using the investigation's findings.

4. I will receive a copy of this form after I sign it.

Signed: _____   Date: _____

Researchers': _____ Date: _____

APPENDIX B: The Interview Guide for Selected Ecopreneurs

The purpose of this interview guide is to support research on *ECOPRENEURSHIP AS AN OUTCOME OF UNIVERSITY STUDY OR AS A PRODUCT OF LEARNING BY DOING (PRACTICE) – A CASE STUDY OF SELECTED ECOPRENEURIAL FIRMS*. We would appreciate hearing your opinions on the following queries. Please be aware that this research is solely for academic reasons and that any information you submit will be kept private.

Gender _____

Marital status _____

Country/region _____

Educational level _____

Job position _____

Occupation _____

1. What motivated/inspired you towards the establishment of your business?
2. Have you had any form of training, formal or informal? How has it impacted your business?
3. Were the operations of your business based on some knowledge acquired from school or any theory?
4. Do you have conflicting issues or difficulties trying to merge knowledge on sustainability acquired in school into practices?
5. Do you think your business could have done better by acquiring knowledge in school or continual practices could bring out the best result?
6. Do you have any previous exposure to ecopreneurship or business study at school level?
7. Why care about the environment?
8. What are the innovative environmental measures put in your product design?
9. How does your operations or activity lead or champion environmental sustainability?
10. Do you wish to acquire more education to impact /improve your entrepreneurial drive?
11. Are there any forms of sponsorship that inspire your entrepreneurial drive?