Transformative Learning in Higher Education for Sustainable Development: Lecturers' Experiences

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Centre for Education and Lifelong Learning

Master of Arts in Educational Practice

2021

National College of Ireland

Submission of Thesis and Dissertation

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Parts of Sections 2.2 and 2.3, and 2.4 were submitted as part of an assessment for MAEP2 (Literature Review)

Acknowledgements

Completing this dissertation would not be possible without the support and encouragement of several people.

I wish to acknowledge the staff of NCI for their dedicated support and professionalism. In particular, I wish to thank my supervisor, Dr Conor Mellon, as well as Dr Meera Oke and Dr Jonathan Lambert.

To the team at Copernicus Alliance, especially Anne, Ingrid, and Mario, at Legacy 17, particularly Ms Marilyn Mehlmann - your introductions to the participants in this study has been invaluable to me.

To the (anonymous) participants in this study, I wish to thank you for your time and effort in facilitating me; your respective commitment to Transformative Learning and sustainability is inspiring.

Finally, I wish to thank my family for their forbearance.

Abstract

Transformative Learning focuses on enabling a radical reassessment of worldviews and behaviour change on the part of students. Such learning outcomes resonate with those concerned with Education for Sustainable Development. Inherent in the sustainability concept is a need for, and a call to, action. This call has led to the adoption of Transformative Learning pedagogies in Higher Education Institutions. Nonetheless, several problems arise concerning its efficacy in higher education. Many of these problems can be attributed to the intrinsic nature of Transformative Learning, which is synonymous with adult and further education. Therefore, its validity as a pedagogy for application in higher education contexts needs validation. Moreover, for lecturers concerned with sustainability, reconciling the inherent need for action may pose professional, personal, and even ethical challenges. This study captures the experience of seven practitioners who successfully harness Transformative Learning when teaching sustainability. The paradigm underpinning this study is constructivism, comprising an ontology of relativism and epistemology of subjectivism. Participants were recruited through international networks; all seven were from outside of Ireland. A series of semi-structured interviews were undertaken. Transcripts were prepared and verified with participants. These were subsequently analysed through the lens of Interpretative Phenomenological Analysis.

Results confirmed that the experience of all participants was positive. Transformative Learning within the context of sustainability programmes within higher education is indeed possible. However, all participants were obliged to compromise. The classic model of Transformative Learning could not be applied in its totality; instead, participants prioritised critical analysis and thinking as these were deemed tractable in terms of classroom constraints and assessment obligations. While pushback from students was occasionally encountered, the obligation on participants to reassess their role and identity as lecturers was considered the most crucial determinant of success. The traditional view of the lecturer as the expert in the classroom needed reconfiguration and replacement with one emphasising co-learning and co-creation of knowledge.

The results of this study validate Transformative Learning as pedagogy for the teaching of sustainability in higher education institutions. The shared experience of participants will inform and guide lecturers to consider adopting a transformative pedagogy when engaged in education for sustainable development.

Keywords: Transformative Learning, Education for Sustainable Development, Higher Education

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List of Abbreviations and Acronyms

ESD	Education for Sustainable Development
HE	Higher Education
HEI	Higher Education Institution
SDGs	Sustainable Development Goals
TL	Transformative Learning

Chapter 1: Introduction

1.1 Introduction

This chapter introduces, motivates, and specifies the overall goal and objectives for this research study. At the core of this study is the concept of Education for Sustainable Development (ESD). ESD encapsulates a holistic notion of education that incorporates knowledge and soft skills such as leadership, social and communications skills, among others. Moreover, ESD encompasses an educational spectrum that includes informal (Gramatakos & Lavau, 2019) and lifelong learning (Milic, 2013). Higher Education (HE) is only one point of this spectrum; however, it is a crucial point as many of the thought leaders of the future will be strongly influenced by their experiences in HE (Shephard, 2021). How ESD is best implemented in HE remains the subject of much debate in academia (Kopnina, 2020; Stein et al., 2020; Mulà et al., 2017). One approach being actively considered is that of Transformative Learning (TL) as this model of learning seemingly aligns more comprehensively and intuitively with the objectives of ESD (Förster et al., 2019). However, before considering the background and rationale for this study in more detail, it is instructive to briefly reflect on my professional and personal interest in this research study.

1.1.1 Motivation

This researcher has both a personal and professional interest in this research study. Professionally, how to enable behaviour change is a question that frequently arises in my research. A recurring attitude that I encounter is that if a technical solution is developed and is sufficiently complex, people will respond and do what is expected. In my experience, such an attitude is naïve in the extreme. As an example, consider energy management within the home; expenditure on energy is a relatively significant financial outgoing for many homeowners. Small changes in behaviour can result in financial savings. It is not difficult to design an App, for example, that will guide and help in the

identification of energy-saving strategies. Often, the App is discarded; sometimes, the App's advice is followed but only for a short time before people revert to old behaviour patterns. Thus, the question arises as to whether TL has anything meaningful to contribute to remedying the problem of behaviour change. Should it do so, many problems arise – ethics, values and agency. At the time of writing, Apps in the Covid pandemic forms part of public health strategies internationally. A brief analysis of the public discourse demonstrates the problem of behaviour change in public health. Looking forward – resolving the problem of behaviour change is vital for the sustainable management of the ageing populations of many western societies, thereby enabling older adults to live independently and healthily for as long as possible.

Misinformation and fake news are terms that increasingly permeate public discourse. While synonymous with political issues, it is increasingly evident that public health and sustainability are likewise subject to false information. Confronting false information and engaging in debate in the public sphere, including social media, is something that many may feel unequipped. Moreover, developing a coherent personal position is hindered by the confusion that reigns. The question arises as to whether TL can be harnessed to confront the prevailing fake news and disinformation phenomenon. However, it must be noted that, notwithstanding the influence of constructivist and Freirian approaches to learning, higher education has been slow to adopt TL.

Traditionally, the role of teachers and lecturers was essentially that of knowledge transmission. The rise of the WWW and internet offers opportunities that radically challenge this role, notwithstanding the significant institutional, structural, and personal resistance that would arise. Significant online resources are available to students at present; availing of these, assuming they have been validated, allows lecturers in HEIs to adopt a more holistic approach to teaching and learning. Moreover, their time is freed to challenge students and help them develop sophisticated worldviews. It is my personal observation that the expertise and time of HEI staff could be harnessed more effectively and efficiently, and TL has a contribution to make here.

1.2 Background and Rationale

Humanity has faced many challenges throughout its history; today is no different. Much of the public discourse over the last 30 years has been dominated by terms such as global warming, climate change, peak oil, renewable energy, amongst a plethora of other topical issues. As awareness has increased, these issues have permeated policies at the international, national, and local levels. Internationally, the Sustainable Development Goals (SDGs), defined by the United Nations (UNs) in 2015, influence policy. These set ambiguous targets for 2030. At the EU level, the Green Deal represents a set of policy initiatives that seek to make Europe carbon-neutral by 2050. As an EU member, policy in Ireland is influenced and aligned with these initiatives.

ESD cannot be meaningfully separated from the prevailing discourse on policies at the international and national levels. These policies influence all kinds of initiatives, and education is no exception. However, the implications for ESD in particular can only be understood within this policy background and within the framework of the sustainability concept itself. Sustainability is transversal and complex. As highlighted by Beasy (2020), the discourse on sustainability has largely "emerged from advanced capitalist societies representing middle-class, tertiary-educated urban perspectives" p. 246. However, an inclusive community-based approach is required if sustainability practices are to become ingrained across society. The situation is exacerbated in that solutions are generally policy-led and driven by experts; thus, laypeople are usually side-lined and afforded little opportunity to "think independently and make their own choices" (Beasy, 2020, p. 247). ESD is one tool through which this mindset and habit can be confronted.

Integrating ESD in HEIs poses many difficulties (Franco et al., 2019); one exemplar problem is an undue focus on the environmental dimension (Wu & Shen, 2016). Historically, the broad education sphere is tasked with preparing students for the so-called global economy. HE, in particular, is expected to meet this challenge of producing global citizens. Challenges arise as the international sustainability discourse is inextricably linked to issues of values and ethics (this discourse also has a

strong geo-political dimension). Thus, it is vital that lecturers construct a personalised understanding of their own educational practice (Sund, 2016). The observations of Hicks and Bord (2001) is perhaps as relevant today as it was in 2001, namely that: “many educators, despite their commitment to global understanding, may make things worse for students by teaching about global issues as if this were solely a cognitive endeavour.” p. 423. Nonetheless, many educators have recognised the challenges of integrating ESD into curricula (Grosseck et al., 2019; Karatzoglou, 2013).

1.2.1 Rationale

Agency and action are recurring themes in ESD (Rieckmann, 2018). Such concepts are alien in many academic disciplines; introducing ESD demands lecturers confront these directly. One approach that has received interest from the ESD community in recent years is that of TL (Rodríguez Aboytes & Barth, 2020; Moyer & Sinclair, 2020; Elliott, 2010). Justification for this interest is a recognition of a need for “a fundamental shift—from learning how to understand to learning how to act and transform” (Schnitzler, 2019, p. 243). However, ESD and TL represent two schools or disciplines, and the bridge between them is currently weak (Schnitzler, 2019, p. 244). Nonetheless, case studies concerning embedding ESD into a curriculum are documented (see e.g. Wahr et al., 2013).

A second challenge relates to the theory of TL. TL is, fundamentally, a theory of adult education (see Chapter 2). Students in HEIs are adults; however, they may not have the experience of critical reflection or the emotional maturity necessary for TL (Mezirow, 1998). Moreover, they may not have the life experience necessary for them to critically assess both their circumstances, how they perceive their reality or how they should or could react. In essence, they may not yet have developed a coherent worldview, in which case the potential of TL to affect meaningful learning is compromised.

A third challenge concerns the integration of TL into institutional structures and practices. Difficulties can be realistically anticipated. Courses are by their very nature constrained by space and timetables. Usually, a defined period is allocated to teaching, followed by time for personal study

and examinations. Where semesterisation is enacted in an institution, a period of 15 to 18 weeks would be typical. However, TL cannot be constrained by time as this will be different for each student. Secondly, TL does not lend itself to traditional assessment (Patterson et al., 2015). How can transformation be confirmed, assessed, or graded? Moreover, how can it be independently validated? Thus, the degree to which TL is suitable for adoption and application in an HEI is open to question.

In recent years, the establishment of informal knowledge-sharing networks such as Legacy17 and the Copernicus Alliance is testimony to the interest in TL for ESD. However, a question arises as to whether TL will fulfil the potential expected of it. If the experience of those applying TL is positive, it should be possible to identify good practice, if not best practice. If negative, the use of TL will likely peter out, or just be adopted in very niche circumstances. There is an urgent need to validate the efficacy and effectiveness of TL for ESD, given the priority given to sustainability at the international and national levels. Thus, this study will investigate the experience of those involved in utilising TL in HE for ESD. The results of this study will have ramifications for ESD and thus policy pertaining to sustainability in its broadest sense. If TL cannot be meaningfully applied within HE, then the ESD community needs to consider other approaches. If TL is indeed tractable within the context of HE, more profound studies may be undertaken to investigate whether TL does indeed fulfil the needs of ESD with HE.

1.3 Purpose

This research study investigates the experiences of those lecturers in HEIs who have adopted a TL pedagogy for ESD. The overall goal is to provide an evidence-based assessment as to whether TL is tractable in ESD. The objectives of the study are to explore:

1. The motivations of faculty for adopting TL.
2. The practice of TL in the institution and the classroom, and the reaction of all key actors.

3. Faculty's understanding of both TL and ESD,
4. The effect of TL on faculty as an individual, both as a professional and as a person, and
5. The future of TL within ESD.

1.4 Outline of Dissertation

This chapter (Chapter 1) has sought to establish the background context for this research study.

The second chapter (Chapter 2) presents a literature review in terms of TL and sustainability. In structuring this chapter, the theory and evolution of TL, and, to a lesser degree, sustainability, are treated critically. A review of the use of TL in HE is then presented. Finally, the practice of TL in ESD is then considered. From this, the research question for this study can be formally defined, placed in the context of the state-of-the-art, and the potential for duplication of research removed. Implicitly, insights into potential methodological approaches for answering the research questions also result.

A methodology to answer the research question is then defined in Chapter 3. Here, the philosophical assumptions underpinning the overall research design are considered. A corresponding strategy for answering the research question is then mapped out. Finally, measures to assure trustworthiness and quality such that the results of the study will withstand independent scrutiny are identified.

Chapter 4 presents the results of the research study. In the first instance, the voice of the participants is prioritised; in emphasising participants perspectives, the reader has more space to form their own interpretation of the collective experience. Results are then explored through the lens of the appropriate literature; in this way, they are placed in the context of current research in HE and TL.

In the final chapter - Chapter 5, this research study is concluded. Here, the results are considered exclusively through the lens of the research question; an answer to the question is proposed and defended. The limitations of the study are then outlined. Finally, avenues for further research are highlighted.

1.5 Conclusion

In this chapter, I have grounded this study within the context of international developments, and especially ESD. The rationale for exploring TL within the context of ESD was considered in detail. Finally, I presented an outline of the structure of this dissertation. In the next chapter, I expand on the various concepts raised above and consider what policy and the research literature contributes to a current understanding of the state of play. From these, I derive a straightforward research question that will fulfil the goal and objectives of this study.

Chapter 2: Literature Review

2.1 Introduction

This chapter presents a literature review of Transformative Learning (TL) in Education for Sustainable Development (ESD). In the first part, I briefly explore the historical development of sustainability, the intrinsic role of education, and why TL has emerged as a viable pedagogy in ESD. I then explore, in detail, the genesis and development of TL as a theory of adult education. The chapter is concluded with a detailed analysis of TL in higher education, from which the research question informing this study emerges.

2.2 Sustainability and Sustainable Development

Sustainability and sustainable development permeate the modern political discourse relating to policy. At the heart of sustainability and related concepts is the future; thus, they challenge individuals and societies to articulate what kind of future they envisage. Simplistically, sustainability is best thought of as a goal, whereas sustainable development represents the process through which this goal is achieved. I explain the genesis of the terms in the next section, but the terms may be regarded as synonyms and are used interchangeably afterwards. However, common to each is the need for education and transformation (Wamsler, 2020; Balsiger et al., 2017).

2.2.1 Conceptualising Sustainability and Sustainable Development

An analysis of the literature confirms a major increase in publications on sustainability in the last the 20 years, though the term is in use since the 1980s. This surge in interest probably reflects an increased awareness of environmental issues in the late 20th century. At present, sustainability as a concept remains open; it is subject to differing perspectives and diverse interpretations, most of which discipline-specific. Examples of contexts might include ecology, finance and engineering (see

e.g., Mihelcic et al., 2014; Maida, 2020; Opdam et al., 2018). Unfortunately, many studies in sustainability do not present a definition. Without a standardised definition, it is difficult to envisage how sustainability can be credibly operationalised and measured (Moore et al., 2017).

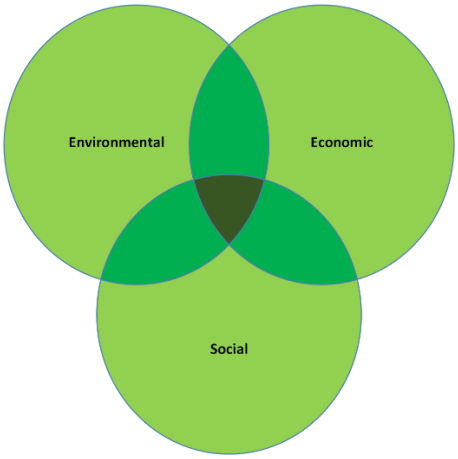

Figure 2.1: The three pillars of sustainability.

Conceptually, sustainability is often presented as three pillars – social, economic, and environmental (Figure 2.1). It is hypothesised that sustainability represents a

> gradual emergence from various critiques in the early academic literature of the economic status quo from both social and ecological perspectives on the one hand, and the quest to reconcile economic growth as a solution to social and ecological problems on the part of the United Nations. (Purvis et al., 2019, p. 1).

The well-known three-component model appears to have been first presented in Barbier (1987, as cited in Purvis et al., 2019). Nonetheless, a rigorous and theoretically solid conception of the three pillars remains absent, thus limiting the theoretical and practical operationalisation of sustainability.

Sustainable Development, as a term, is widely accredited to the Brundtland report (World Commission on Environment and Development, 1987). Released by the UN in 1987, the focus of this report was the identification of solutions that enable sustainable development into the 21st century, seeking to meet "the needs of the present without compromising the ability of future generations to

meet their own needs" (p. 16). While the core concept incorporated prior ideas, it was in the following years that it became popular, becoming a cornerstone of much environmental research. However, its theoretical underpinning remained unclear. Munasinghe (1993) identified three underlying concepts:

1. Economic, underpinned by the concepts of economic efficiency and optimality.
2. Ecological, underpinned by biological and physical systems.
3. Socio-cultural, underpinned by a desire to maintain social and cultural systems.

Goodland (1995) focuses on the notion of environmental sustainability, arguing that each concept should be treated independently to identify actions necessary to achieve global sustainability. He does acknowledge the desirability of a more holistic concept of sustainability emerging in the future; nonetheless, he regards sustainable development as different from sustainability and more ambiguous. Subsequently, fear is expressed that sustainability might become a "landfill dump for everyone's environmental and social wishlists" and that each type of sustainability is best analysed from a corresponding discipline perspective (Goodland & Daly, 1996, p. 1002). Thus, an inherent tension emerges between the economic and environmental views of sustainability. In sustainable development, a similar tension exists between those who focus on the individual dimensions of sustainability and those who see adopt an integrative perspective. For many, the emphasis on development suggests giving primacy to commodifying the environment, with environmental considerations being a subsidiary concern in pursuing economic growth. Castro (2004) challenges this view, advocating integrating critical approaches and perspectives, including poststructuralist cultural theory and ecological Marxism.

2.2.2 Education for Sustainable Development

Education for Sustainable Development (ESD) is a crucial enabler of the societal transition to more sustainable lifestyles and practices. The sustainability discourse over the last twenty years, both in

terms of policy and strategy, has often incorporated the dimension of ESD; more recently, it is perceived as crucial to the 2030 Sustainable Development Goals (SDGs) of the UN. It has its roots in Environmental Education (EE), a recurring theme in the environmental discourse in the last 30 years of the twentieth century. The early years of the 21st century saw the launch of the decade of ESD from 2005 to 2014 by UNESCO. The goal of this initiative was to focus global education activities towards sustainability. A subsequent initiative, the Global Action Programme (GAP), ran from 2015 to 2019 with the critical objective of scaling up education and learning for sustainable development. GAP adopted a two-fold approach for driving ESD actions, namely integrating sustainable development into education and integrating education into sustainable development. Underpinning this approach were two objectives i) "to reorient education and learning so that everyone has the opportunity to acquire the knowledge, skills, values and attitudes that empower them to contribute to sustainable development"; and ii) "to strengthen education and learning in all agendas, programmes and activities that promote sustainable development" (UNESCO, 2015). In 2019, UNESCO adopted a global framework - ESD for 2030 or, more formally - Education for Sustainable Development: Towards achieving the SDGs. Scheduled to operate from 2020-2030, the initiative is in the process of being ramped up. The roadmap for ESD for 2030 (UNESCO, 2020) priorities five areas - policy, learning environments, building capacities of educators, youth and local level action, focusing on achieving the SDGs and the "great individual and societal transformation required to address the urgent sustainability challenges" p. 3. One criticism of the decade of education for sustainable development was that it did not acknowledge the role of neoliberalism in hindering or blocking transitions to sustainability (Huckle & Wals, 2015). Furthermore, the predominant role and contribution of NGOs to ESD, in marked contrast to formal government agencies, has been observed (Wals & Kieft, 2010).

According to UNESCO (2017):

> ESD aims at developing competencies that empower individuals to reflect on their own actions, considering their current and future social, cultural, economic, and environmental impacts, from a local and a global perspective. Individuals should also be empowered to act in complex situations in a sustainable manner, which may require them to strike out in new directions; and to participate in socio-political processes, moving their societies towards sustainable development. (p. 7)

ESD is subsequently defined as a "holistic and transformational education that addresses learning content and outcomes, pedagogy and the learning environment" requiring "a shift from teaching to learning" demanding an "action-oriented, transformative pedagogy which supports self-directed learning, participation and collaboration, problem-orientation, interdisciplinarity and transdisciplinarity and the linking of formal and informal learning" (UNESCO, 2017, p.7). Eight competencies are identified as necessary for sustainability - systems thinking, anticipatory, normative, strategic, collaboration, critical thinking, self-awareness and integrated problem-solving. However, it is emphasised that competencies cannot be taught; instead, the learners must develop skills through action based on experience and reflection.

Mainstreaming ESD demands the full integration of both curricula and learning outcomes (Gregersen-Hermans, 2021). Curricula are considered inclusive of HE, vocational training as well as primary and secondary education. Two distinct learning outcomes categories are identified: empowerment that focuses on independent critical thinking and behaviour modification which seeks to encourage an alteration in learners' habits that conform with ideals (Disterheft et al., 2013). Approaches to introducing sustainability topics into curricula coalesce around two methods – augmentation of existing topics and launching vertical courses dedicated to sustainability topics. Both are tractable though there is recurring observation in the literature that the latter risks being superficial and contributing to a box-ticking exercise. Multiple studies of ESD curricula are

documented. Ceulemans and de Prins (2010) outline a methodology for teachers when introducing sustainability into curricula. Glavič (2020) observed a chronic lack of suitable content for ESD programmes and proposed a model for an exemplar sustainable development course. Badea et al. (2020) acknowledge the need for empirical studies of sustainability by universities and how ESD affects students' behaviour; they conclude that actions must be voluntary rather than compulsory. Hajdukiewicz and Pera (2020) advocate using MOOCs, arguing that they promote inclusion and gender equality, enabling an equitable approach for lifelong learning.

What pedagogy to adopt with ESD is a question that has occupied with ESD community almost since its earliest days (Sherren, 2008). Recurring themes from the literature include trans- & inter-disciplinary; problem- & action-oriented, and learner-centricity. As articulated by Sibbel (2009), how can educators "offer experiences which develop graduate attributes of self-efficacy, capacity for effective advocacy and interdisciplinary collaboration, as well as raise awareness of social and moral responsibilities associated with professional practice"? (p. 68). Kalamas Hedden et al. (2017) advocates an active learning constructivist approach, for example. Elsewhere, the need for critical thinking is emphasised (Straková & Cimermanová, 2018). Gaining a deeper understanding of the complexity of sustainability requires bringing students to reality on the ground; here, experiential learning offers one viable approach (Davidson et al., 2020). Likewise, social learning has been suggested as a pedagogy for ESD (Bolmsten & Kitada, 2020). However, what constitutes social learning may be questioned (see, e.g. Reed et al., 2010).

Ecopedagogy is a movement that emerged in the late twentieth century, representing a fusion of ecology and education. Adopting an ecological worldview, ecopedagogy envisages education occurring through ecology; it has a philosophical (ecosophy) and critical (ecojustice) dimension (Hung, 2021). In the latter case, ecopedagogy broadly aligns with the critical pedagogy of Friere and is described as "transformative teaching in which educators dialectically problem-pose the politics of socio-environmental connections through local, global, and planetary lenses" (Misiaszek, 2020, p. 3).

Marouli (2021) likewise advocates a critical pedagogy but contrasts the western approach of prioritising standardisation and certification of knowledge with the indigenous approach, which cultivates a collective awareness necessary for sustainable societies. Holism and pluralism are often seen as essential for an ESD pedagogy, constituting traits that prevent ESD from becoming perceived as, or morphing into, indoctrination (Pauw et al., 2015).

Finally, fundamental to ESD is the notion of transformation (Dannenberg & Grapentin, 2016; Ichinose, 2017). UNESCO speak of the need for a "profound transformation" in thinking and acting. ESD itself is seen as transformational education, demanding pedagogies that are inherently transformative. This emphasis on transformation has led educationists in sustainability to seeking and evaluate pedagogies that encapsulate such characteristics. TL is seen by many as one such approach (see e.g., Rodríguez Aboytes & Barth, 2020; Singer-Brodowski et al., 2019).

2.3 Foundations of Transformative Learning

Jack Mezirow (1923-2014) is considered the founding father of TL. The concept was introduced in 1978 and has evolved since then. For this discussion, Mezirow's overview paper (2009) is considered the definitive source; tracing the evolution of Mezirow's train of thought between 1978 and 2009 is beyond the scope of this discussion. TL is an adult education paradigm; it refers to that learning that occurs in adulthood where individuals radically reassess their value and belief systems, adopting a new worldview in response to this process. Many well-known education theorists have influenced Mezirow – Friere, Kuhn and the philosopher Habermas. It is generally not reported that a key influence was Mezirow's wife - Edee; she returned as an adult to complete her undergraduate education, and her transformative experience was observed at close quarters by Mezirow (2009).

Fundamental to TL Theory is the notion of a frame of reference; examples of frames of reference include habits of mind, assumptions, and expectations. When such frames of reference are radically challenged, it may be said that a transformative learning process occurs. Such changes are inherently

epistemological rather than just the acquisition of new knowledge. TL may occur in either instrumental learning or communicative learning. Thus, TLT is defined "as a metacognitive epistemology of evidential (instrumental) and dialogical (communicative) reasoning" (Mezirow, 2009, p.4). At the heart of TL is the so-called disorienting dilemma, representing the first step in the TL process. Fundamental to the resolution of this dilemma is the critical self-reflection of assumptions. The resultant transformation may be either epochal representation, a sudden reorientation, or cumulative, resulting from a progressive series of insights.

Transformation occurs after ten stages, according to Mezirow (1994):

1. A disorienting dilemma.
2. Self-examination with feelings of fear, anger, guilt or shame.
3. A critical assessment of assumptions.
4. Recognition that one's discontent and the process of transformation are shared.
5. Exploration of options for new roles, relationships and action.
6. Planning a course of action.
7. Acquiring knowledge and skills for implementing one's plans.
8. Provisional trying of new roles.
9. Building competence and self-confidence in new roles and relationships.
10. A reintegration into one's life on the basis of conditions dictated by one's new perspective.

2.3.1 Alternative Perspectives of Transformative Learning

Mezirow's theory on TL is best known; however, several contemporaries of Mezirow also developed perspectives concerning TL and education. Dirkx (1998) identified four strands of influence in the development of TL, including that of Mezirow. For comparative purposes, it is instructive to consider the other three strands.

Paulo Freire (1921-1997) developed his ideas while engaged in literary education with the poor in Latin America. Mezirow acknowledges his influence. Fundamental to Freire's model of TL is that of

conscientisation (Montero, 2014), defined as raising consciousness or critical consciousness. In essence, Freire's model concerns helping students analyse and question both their situation and ultimately the state of the world to affect change. Thus TL is perceived as emancipatory and liberating, both for the individual and society. It is the focus on action in the societal dimension that grounds Freire's work in critical theory. In contrast, Mezirow focusing more on the individual, arguing that TL must focus on the foundations of learning so that effective social action can then be undertaken. In the case of critical pedagogy, it "crosses a threshold between teaching criticality and indoctrinating" (Burbules & Berk, 1999, p. 12), something alien to Mezirow's interpretation of TL that focuses on thinking critically about one's assumptions.

Robert Boyd focuses on the concept of transformative education, seeing the objective of education as "promoting personal transformation" (Boyd & Myers, 1988). In focusing on the personal, he is like Mezirow. However, like Freire, he promotes consciousness as a critical component of adult learning. Nonetheless, Boyd is influenced by the psychology of Carl Jung, so the concepts of transformation and consciousness hold different meanings from those of Mezirow. In transformative learning, such learning emerges from a relationship and dialogue with the unconscious psyche.

Laurent Daloz adopts a developmental perspective (Daloz, 1986). Here, when adults return to formal education, their motivation is to understand life issues or questions facing them. Adults are perceived as in-between phases of development where the meaning established to the old phase is no longer consistent with or relevant to their life experiences. Thus, from a development perspective, the adult seeks to make new meaning as those they had when younger is no longer valid. Unlike Mezirow and Freire, Daloz firmly grounds his work within adult learning in HE contexts.

Though not treated in detail by Dirkx, other contributors to TL development include Vygotsky and Engestrom. The work of Vygotsky (1980) on sociocultural theory, including the concept of the zone of proximal development, has influenced the development of the Expanded Reflection Cycle for Transformative Professional Learning (Tinsley & Lebak, 2009). Engestrom's work on expansive

learnings envisages simple ideas being transformed into new forms of practice (Engeström, 2015); however, the emphasis is on the collective rather than the individual (as per Mezirow).

2.3.2 Towards a Contemporary Model of Transformative Learning

Viewed holistically, TL continues to evolve since the 1980s. Though manifestly successful if measured by the number of publications, nonetheless, many complications were emerging. The diversity of views was rich and complex, but "a tendency to think in dualisms" was evident (Cranton & Taylor, 2012, p. 3); thus, a crucial challenge of how best to ensure the coexistence of diverse theories was identified. A recurring theme was the emphasis on replicating TL in various educational settings but overlooking the in-depth theoretical analyses needed to enhance TL theory. To remedy this situation, Taylor and Cranton (2013) identified five specific issues for further research; these included the role of experience, empathy, and the desire to change. However, the implicit assumption that transformations are inherently good is disputed (Newman, 2012). Furthermore, the potential contributions of other approaches, for example, positivist and critical theory, could be considered. In this way, the perceived stagnation of TL and its lack of theoretical progress could be countered.

TL's evolution over four decades is testimony to its robustness. Its importance in adult education is widely acknowledged and seen by many as offering a conceptual model in an often-neglected area, although Knowles' work on andragogy must be acknowledged (Knowles, 1978). Its potential for validation of educators' work should not be underestimated; in the words of Hoggan (2016a) "what better way to evaluate the difference we make than in the potential for learners to transform?" (p. 59). The popularity of the theory has resulted in a crucial problem: it has lost its distinctive meaning, thus limiting its usefulness (see, e.g. M. Newman, 2012). One solution to this problem proposed by Hoggan is that TL is not a theory per se; instead, it is best viewed as an analytic metatheory.

A metatheory is broadly concerned with the theory of other established theories or for which the subject matter is itself a theory. In sociology, two varieties exist – synthetic and analytic. Synthetic

metatheory seeks to categorise theories; analytic seeks to dissect theories and categorise the common components amongst the underlying theories. Thus, for analytic metatheory, the assumption is that some commonalities or phenomena are independent of the sub-theories. In the case of TL, an analysis of the TL literature resulted in the following typology of the learning outcomes (Hoggan, 2016b):

- worldview, e.g. assumptions and beliefs
- self, e.g. self-knowledge
- epistemology, e.g. more discriminating
- ontology, e.g. affective experience
- behaviour, e.g. actions consistent with new perspectives
- capacity, e.g. cognitive development

Here, learning outcomes represents one commonality or shared phenomena. In the case of learning outcomes, it can be easily seen that it offers a baseline and common framework for researchers when discussing their respective TL practices and experiences. In Hoggan's scheme, Mezirow's theory is just one of the underlying theories. Thus, it is suggested that it is better to decouple TL theory from Mezirow; in his case, it is more appropriate to use his original term, Perspective Transformation, when discussing his interpretation of the TL metatheory.

2.3.3 Criticisms of Transformative Learning

Key actors that contributed to TL development included Habernas (Europe) and Freire (South America). Nevertheless, North American scholars have undertaken most of the research in TL (Taylor & Cranton, 2013). The risks here are that what works in North America may not translate to other contexts; non-western approaches may have much to offer. Surprisingly, Europe is a case in point. A review by Kokkos (2012) exploded this issue, concluding that that "adult educators in Europe believe that the theory of transformative learning shares elements with their theoretical background and

that it needs to be enriched with various approaches" (p. 297). This divergence of views is reflected by emphasising personal or individual transformation in the TL discourse, whereas the social dimensions of adult learning remained neglected. At a European level, Kokkos (2014) observed that many European theorists were not familiar with Mezirow's later work, basing their judgment on early versions of his theory. He proceeds to identifies several issues that hinder the development of TL in a European context, including.

1. The divergent European and North American traditions of adult learning.
2. Limited awareness of the fullness of TL theory.
3. Limited awareness of current thinking in TL due to the US-centric nature of conferences.
4. Focus on the English-speaking events and journals.

Thus, in the early years of the 21st century, TL is characterised by fragmentation and even stagnation.

As one of the most established adult education theories, TL has naturally been critiqued in the years since its inception (Taylor & Cranton, 2013). It must be stated at the outset that Mezirow welcomed such critiques and often, but certainly not always, sought to incorporate criticism into his thinking and model of TL. One intrinsic characteristic of TL is the need for critical reflection. For those subscribing to a critical theory model of TL, the need for resultant action is crucial. However, boundaries between critical thinking and action can be blurred and even lead to charges of indoctrination. Mezirow acknowledges the influence of Freire but prioritised the need for critical reflection and analysis by students.

Schnepfleitner (2021) argues that while the core elements of TL, namely critical reflection and dialogue, are interdependent and must exist for TL to occur, the issue of context has been under-appreciated. Specifically, learners need to independently engage with TL concepts within the context of their own lives but engage with others to examine their new knowledge critically.

Fleming (2018) notes “that critiques persist and focus on whether the theory has an adequate understanding of the social dimension of learning and whether it is overly rational” (p. 1). Two developments address these critiques. The first concerns the evolution of critical theory; it has developed since TL was first expounded. The second concerns the work of Alex Honneth (a student of Habermas and successor to his chair in social philosophy) on the theory of recognition. Both developments contribute to TL theory, in the view of Fleming. Thus, “Intersubjectivity and recognition become the necessary preconditions for critical reflection, discourse, democracy and transformative learning” (p. 1). In this way, the private nature of disorienting dilemmas may be reconciled with the public dimension of active citizenship.

2.3.4 Transformative Learning Today

To paraphrase Anand et al. (2020), TL is a “living theory”. TL continues to be adopted, and experiences are reported in the literature despite the ambiguity over the term TL. Nonetheless, the potential of TL to affect meaningful change in society has been noted in the academic community (Boström et al., 2018). One critical global initiative informing government policies is the Global Goals, or the Sustainable Development Goals (SDGs). First defined by the United Nations in 2015, the SDGs constitute 17 interconnected objectives for enabling a better world by 2030. While the objectives of the SDGs are laudable, their implementation is problematic for a myriad of reasons. Aside from the criticism that there are too many of them (there are 169 associated targets), achieving the goals demands intrinsic change at the societal and individual levels. While the need for change is acknowledged, how best to manifest the desired changes are open to question. For these reasons, the degree to which TL enables a tractable pedagogy for affecting the meaningful change necessary for ESD is being considered by practitioner networks such as the Copernicus Alliance and Legacy17.

2.4 Transformative Learning in Practice

At the time of writing (May 2021), the Covid pandemic is rampant in India. The pathway out of the pandemic remains distant and unclear. It may be argued that the world can only learn its way out of this crisis. Covid, and the situations arising from it going forward, may be regarded as a disorientating dilemma as per the definition of Mezirow. Eschenbacher and Fleming (2020) develop this theme, proposing TL as a framework for lifelong learning that draws from the American philosopher Rorty and German philosopher Habermas - the latter, an acknowledged influence on Mezirow. The authors challenge the EU definition of active learning (Davies, 2001) that focuses on employability and active citizenship, arguing that issues such as solidarity, dealing with uncertainty, ethics and co-creation are essential. It must be noted that the EU definition was based on a memorandum from the year 2000; several initiatives, most recently, the Lifelong Learning Platform, has resulted in a broader interpretation of lifelong learning (Xhomaki et al., 2019).

A cursory examination of the literature will quickly testify to the range and depth of research in transformative learning. The evolution of TL theory has been tracked by Taylor 1998, 2007, 2017; Taylor & Cranton, 2012). Hoggan (2016b) has focused on learning outcomes, Blackburn Miller (2020) focuses on the arts, the health profession (van Schalkwyk et al., 2019), Romano (2018) focuses on assessment tools. For this discussion, strategies for evaluating the impact of TL are essential, noting that there is no singular agreed methodologies or metrics for this; metrics are usually institution-specific. To assess the state-of-the-art, two academic repositories ERIC and SCOPUS were searched using two search terms, “transformative Learning” and “qualitative”; the search was restricted to the title, abstract and keywords. A corpus was then assembled for further study. It must be observed again that TL has, in the view of many, has become an *umbrella term* and has developed in directions that Mezirow may not recognise.

2.4.1 Transformative Learning in Higher Education

One's own learning experiences as a student may shape pedagogy and practice as teachers. Attia (2014) explores the effect on teacher education via interviews with three in-service Arab language teachers. The importance of teacher training in helping unpack their experiences is highlighted. This was considered a transformative process for the participants where their beliefs and previous experiences were radically challenged. While these experiences have the hallmarks of a transformative experience as per Mezirow, they are not reported as such; likewise, the participants in the study are not reported as viewing their experiences in such a context. Similarly, in the case of ICT, many teachers are dependent on their prior learning at the undergraduate level; thus, their integration of ICT into their teaching is first encountered during teaching practice. It is reported by Izmirli and Yurdakul (2014) that such integration is transformative when considered through the lens of Mezirow's TL theory.

Bain et al. (2019) follow a similar theme of exploring the teachers' experience, in this case, as they undertake a teaching qualification. In Scotland, lecturers undertake a Teaching Qualification for Higher Education (TQFE) in the first two years of their employment; here, they adopt a dualistic teacher/student role for these two years. To minimise "insider" bias, the authors only interviewed participants outside of their institutions and subsequently concluded that the TQFE offers a transformative professional development model. However, the TL model adopted is that of Kennedy (2005), whose focus is transformative Continuous Professional Development (CPD). Themes that emerge from this contextualised study include participants' views of themselves as professionals, their status rising from their qualification, and their relationships with colleagues.

Palliative care exposes students and their clinical supervisors to pain and death regularly. Such encounters may be described as disorienting dilemmas that give rise to TL. In practice, there is an omnipresent need for empathy and compassion. Kangas-Niemi et al. (2018) explored this theme in a constructivist study with six clinical supervisors, investigating how they facilitated learning of the

affective or emotive element of professional competence. Four themes emerged, including building a relationship, the space for learning, the pedagogical environment and mirroring where the supervisors share their own experiences. Holistically, the question of emotion arises in how it influences TL and emerges from TL.

Health and medical faculties are often innovative in their new pedagogies; thus, several studies may be found in the literature that report on TL. Clinical nurses often find themselves serving as faculty, but with minimum preparation and training. Cooley and De Gagne (2016) document a hermeneutic-phenomenological study that explores the experience of novice nursing faculty in academia. The expectation is that insights will emerge into conditions that facilitate TL, and the subsequent discussion is presented through this lens. The degree to which such studies are classified as hermeneutic phenomenological has been radically challenged (see, e.g., Kakkori, 2009); moreover, whether the learning that occurs would be classified as transformative in the view of Mezirow, Freire, and colleagues is questionable.

Naccarella et al. (2016) explore how health professionals can become agents of change through professional develop to better align policy and practice. The paradigm is described as participatory realism, enabled through a mixed methods methodology; it is grounded in Mezirow's theory of TL. The results are varied as, according to the authors, professional development is not an endpoint but a process of enabling ongoing change. This observation is consistent with TL; however, it tends to challenge, rather than directly contradict, documented research in higher education where authors go to significant effort to convince the reader and maybe themselves that a transformation has indeed occurred. Thus, for HE professionals, there is a tension between the need to demonstrate that transformative learning has indeed occurred tangibly, the intrinsic nature of TL and the ethical dimension.

2.4.2 Transformative Learning for Sustainability Education

Examples of TL as an enabler of ESD are documented in the literature (see, e.g., Rodríguez Aboytes & Barth, 2020; Boström et al., 2018). However, there is an increased emphasis regarding HEIs themselves in terms of sustainability. For example, Disterheft et al. (2016) present a model of indicators that HEIs could use to assess their sustainability practices. However, it does not focus on issues such as quantitative metrics, ranking and benchmarking; rather, it focuses on participatory engagement and empowerment on the part of all actors. One of the indicators focuses on the quality of communication and the democratic perspective; this indicator is influenced by Mezirow categories for "ideal discourse".

Incorporating ESD into a curriculum impacts on teaching staff in the first instance. A study in Australia highlights the need for academics to engage in their own transformation if they are to attain a capacity to teach ESD (Wahr et al., 2013). Other themes that emerge include institutional support and professional development to ensure the appropriate TL environment. A recurring theme with sustainability is that it is often perceived as a legal requirement or box-ticking exercise. To change this perspective, Brunnquell et al. (2015) advocate critical reflection and TL as a means of challenging the conventional view of management professionals who see their role as maximising monetary value for stakeholders; in this way, sustainability becomes an intrinsic part of management, representing a paradigm shift that perhaps delivers alternative rationality for business management.

Practical constraints are ubiquitous in education and thus render the ideal or perfect solution unviable. Cotton et al. (2009) advocate adopting a theory of second-best as a tractable way of progressing in such scenarios. Nonetheless, an acute awareness of the limitations of this approach is needed; in particular, there is an omnipresent risk of evading responsibility or circumventing duty. However, it does constitute one tractable method of introducing both ESD and TL into classrooms. It

should be noted that even though the limitations of conventional approaches to teaching are known for long, the standard classroom, MS PowerPoint™ and "chalk & talk" still prevails.

Schumacher College, Devon was the subject of an exploratory case study by Blake et al. (2013); staff and students contributed. This college is described as an alternative, civic society college; its motto is "transformative learning for sustainable living". Staff and students subscribe to the views of both Freire and Mezirow; nonetheless, a range of pedagogies are adopted. A key observation is that of the readiness of staff being comfortable with the possibility of unpredictable and uncomfortable situations arising. Moreover, students becoming agitated when engaged in a TL process is a common occurrence. For staff, the institution's support is essential; indeed, the need for a complete system response is emphasised. Value-neutral education is seen as a crucial challenge when mainstreaming TL and one that HEIs should be cognisant. Indeed, there is a resonance with Moore's (2005) perceptive observations concerning the readiness of institutions and their students for TL.

It is instructive to remember that the roots of TL are in adult education; thus, TL has potential for industry and NGOs, amongst others. However, the issues and challenges being faced will radically differ from HEI contexts. It should be noted that many organisations employing graduates may have an implicit expectation that they will have covered sustainability topics as part of their studies; however, this may be an incorrect assumption. Noting the struggles of educational establishments to deliver ESD, Schnitzler (2020) advocates the adoption of TL by NGOs and start-ups, identifying six success factors from 42 guided interviews (24 start-ups and 18 NGOs). A transformed sense of identity and change of belief-system are emergent themes. Theory U (Scharmer, 2018), an awareness-based model of change management that seeks to promote prototyping the new to explore the future, is seen as one tractable approach for TL. This theory builds on a solid tradition of action research, co-creation and learning-by-doing at MIT.

In summary: several themes emerge from the discussion on TL that merit further consideration. Firstly, TL is a theory of adult education. The degree to which the average student in HEIs, aged in

their late teens or early 20s, have sufficient life experience to reassess their beliefs and values radically may be questioned; a credible counterclaim is that they are perfect students as they are frequently in an active process of "finding themselves". Secondly, TL is inundated by a multiplicity of definitions inducing confusion in researchers and teaching staff alike. An agreed definition or even a suite of agreed variants would significantly eliminate ontological and epistemological confusion. Thirdly, for those concerned with ESD, how pedagogies and practices work best remain open to question. Interest in the potential of TL for ESD is evident. However, there is a distinct paucity of empirical evidence that suggests that it is the best approach or even tractable within the practical constraints of higher education. Evaluations of TL from teachers' perspectives are surprisingly rare; in general, more attention has been given to students' perspectives but outside of ESD. Cotton et al. (2009) observed that the theory of ESD and TL were far from the practice on the ground. Though this observation was made over a decade ago, it still rings true today. Given the current consensus that ESD, interpreted broadly, is a societal imperative, it is vital that the viability of TL for ESD in HEIs be confirmed urgently. Thus, for research question for this study is as follows:

> What is the experience of faculty experience in Higher Education Institutions when adopting a Transformative Learning approach in Education for Sustainable Development?

In seeking to answer this primary research question, a number of subsidiary research questions must likewise be addressed. These are:

1. How do faculty define "Transformative Learning" and interpret "transformation"?
2. How does adopting Transformative Learning affect faculty perceptions of themselves - both professionally and personally.

3. How is Transformative Learning implemented within the practical constraints of modern higher education institutions.

4. How do faculty understand the nature of “transformation” within the context of Education for Sustainable Development?

2.5 Conclusion

In this chapter, I briefly outlined sustainability, culminating in a detailed discussion on ESD. This discussion was followed by detailed treatment on TL; here, the discussion culminated in a descriptive analysis of the use of TL in HEIs. Despite extensive research since the late 20th century, the plausibility of applying TL for ESD in HEIs remains an open question. Thus, the research question driving this research study was the specified. In the next chapter, I describe the methodology that will be harnessed to answer this question.

Chapter 3: Methodology

3.1 Introduction

This chapter describes and justifies the methodology necessary to answer the research question driving this study. Firstly, philosophical assumptions underpinning the study are considered; a corresponding research design is then constructed. A strategy for identifying, collecting and analysing the required data is then defined. Finally, the omnipresent issues of trust and quality are examined.

3.2 Philosophy & Approach

Before considering the philosophical approach guiding this study, it is helpful to reflect, albeit very briefly, on the concept of experience, given its centrality to the research question. What is experience? How is it defined? Can experience be meaningfully measured? For this discussion, constructing a novel definition or developing a metric that purports to measure experience does not contribute to answering the research question; however, an agreed ontological and epistemological perspective is demanded. Thus, experience is not merely a fleeting impression or a transient episode, though it is often considered as such. Instead, this study regards experience as "a unity of meaning, something which can be fixed and recollected as such" (Burch, 1990, p. 133). Strictly speaking, this definition refers to a stricter interpretation of experience, referred to as the "lived experience". At first sight, such a phrase might appear a tautology; however, it differentiates everyday experiences from those that are at once more profound and temporally coherent. Lived experience is a translation of the German philosophical term "erlebnis", meaning "to live, to see"; however, the term is contentious (cf. Paley, 2018).

3.2.1 Philosophical Assumptions

When considering the approach to the research question central to this dissertation, the philosophical assumptions being brought to this study needed careful reflection. An immense repository of literature is available for consultation (see e.g., Blaike, 2009); for this study, the discussion is grounded in the typologies articulated by Creswell and Creswell (2018, p. 5). Four philosophical worldviews or paradigms are considered. Empirical observation and measurement are critical characteristics of postpositivism; however, a question must arise as to how determinism and reductionism align with the need to capture collective experience. Issues of power and justice are emphasised by the transformative worldview (Mertens, 2007); it may be conjectured that such issues will arise to some degree, but it is unlikely they will be central to the collective experience. The real-world, problem-focused nature of pragmatism makes it an attractive proposition; nonetheless, this study does not focus on problem resolution. This study prioritises understanding and meaning so that the collective experience can be articulated. Thus constructivism is a logical and credible worldview to underpin this study. The observation of Crotty (1998, as cited by Creswell & Creswell, 2018, p.8) resonates:

> Qualitative researchers seek to understand the context or setting of the participants through visiting this context and gathering information personally. They also interpret what they find, an interpretation shaped by the researcher's own experiences and background.

Constructivism (Riegler, 2012; Liu & Chen, 2010) is predicated on the notion that individuals seek to develop complex but subjective meanings of their world. It emphasises that knowledge cannot exist outside of our minds and cannot be given; instead, it must be created from within (Hendry et al., 1999). Constructivism is pervasive in the philosophy of education but has its critics (see. e.g. Elkind, 2004; Olssen, 1996); In the view of Fox (2001), "constructivism moves us beyond naivety but perhaps not very far" (p. 34). In the literature, constructivism is often referred to as social

constructivism (see e.g. Adams, 2006) and is usually influenced by Vygotsky's thoughts. Likewise, interpretivism is often used in close association with constructivism (Zahle, 2021; Scauso, 2020).

Constructivism envisages meaning being constructed usually, but not always, in interaction with others. When adopting a constructivist stance, the researcher is unambiguously focusing on interpreting the meaning that others ascribe to their world. Meaning cannot be inferred without an understanding of individuals' context and their historical or cultural norms. Ultimately, the researcher must interpret what they find; such interpretation is invariably influenced by the researcher's own experiences and background.

Constructivism is a nebulous concept. For some, it is an epistemological concept (Badie, 2017); however, for many, it is a theory of learning (Fernando & Marikar, 2017). Constructivist learning theories are increasingly challenging behaviourism which focuses on the teacher as a transmitter of knowledge in the early decades of the 21st century (Hackmann, 2004). Rather than being regarded as a single theory, in the words of Tan (2017),"constructivism is best understood as a continuum with diverse and overlapping views of 'reality', 'knowledge', 'teaching' and 'learning'." (p .239)

Interpreted literally, core to the constructivist learning theory is students' ability to construct their own world views. While such an approach may promote valued skills such as critical and independent thinking, tough questions regarding assessment arise. For example, how is a way of thinking decoupled from the curriculum for assessment purposes (Ahmad et al., 2020). Nonetheless, reconciling the implications of constructivism learning theory with conventional practice and experience may raise difficulties for learning professionals. In China, one response is the "Xueji" (Record of Learning); Xueji advocates a teacher-directed and learner-engaged approach that challenges the learner-centric nature of constructivism (Tan, 2015).

Constructivism regards knowledge as being "made" as distinct from being "discovered". Such knowledge may be the result of personal constructivism, influenced by Piaget; alternately, knowledge may be socially constructed, as per the writings of Vygotsky (see e.g. Liu & Matthews,

2005). As noted by Small (2003), theories of learning cannot be credibly separated from theories of knowledge; thus, epistemology within radical constructivism (Von Glasersfeld, 1995) become problematic in that "outcome is a theory of knowledge that holds that our concepts cannot be related directly to an external reality" (p. 484). This observation need not necessarily apply in other flavours of constructivism. However, advocates of constructivism in education, in treating it solely as a learning theory, have enforced such a separation, suggesting that it makes no ontological claim and that it is "post-epistemological" (see e.g. Harris, 2009). Such views have been challenged and refuted; see Rowlands and Carson (2001) for one refutation. Colliver (2002) goes further, arguing that constructivism is not a theory of learning but that it merely confuses epistemology and learning. However, he explicitly acknowledges constructivism as a "profound insight into the nature of human knowledge", acknowledging that it is a "humble admission that human knowledge consists simply of our claims, our constructions" (p. 49). Thus, knowledge cannot be meaningfully separated from language. In fact, the only way we have of describing reality, or more correctly, our worldview, is through language.

In considering this study through the lens of constructivism, the primacy of language and its intrinsic role in this study is acknowledged. In seeking to understand experience, how meaning is ascribed and understanding subsequently emerges are of fundamental importance. In asking participants to articulate, reflect, and report on their diverse experiences, there is no alternative outside of language to articulate their experience, allowing for subjectivity and hermeneutics. In conclusion: the debate and reservations concerning constructivism are acknowledged. Nonetheless, for this study, the worldview (paradigm) is that of constructivism as articulated by Guba and Lincoln (1994), comprising an ontology of relativism and epistemology of subjectivism.

3.2.2 Research Approach

Capturing the essence of experience does not lend itself to a quantitative study; the complexity of experience as a concept was indicated at the start of this section. The choice is thus between a

singularly qualitative approach or one based on mixed methods. As a strategy of inquiry, mixed methods are attractive; through triangulation, a more detailed analysis is possible. However, the scale of any meaningful study demands the availability of a larger participant population than is currently available. More importantly, it is not apparent how an innate understanding of participants' experience, the core of this study, would benefit from additional quantitative analysis. Thus, for this study, the strategy of inquiry was purely qualitative.

3.2.3 Research Design

In considering the approach to research design, the five approaches listed by Creswell and Poth (2017) were explored. Again, the research question is central, and how each approach was likely to contribute to a meaningful answer was considered. Culture is not of relevance to this study; thus, an ethnographic research approach is eliminated. Theory development is not an objective; therefore, a design based on grounded theory is inappropriate. Telling the story is of interest, but a narrative alone is insufficient to answer the question. A bounded case study offers interesting possibilities without doubt due to its inherent flexibility. However, the broad in-depth treatment characteristic of the case study approach would not adequately explain the collective experience and common meaning necessary to answer the research question. Thus, a phenomenological study is best suited to the core theme of motivating this study - experience.

Both TL and sustainability, by their very nature, encapsulate agency. Thus a strong case may be made for an approach based on critical theory. However, this study is concerned with the lived experience rather than merely descriptive reporting on lecturers' experiences. Where the focus is merely descriptive, the appropriateness of phenomenology is contested (Giorgi, 2014). However, experience is first articulated (in this case by faculty) and then interpreted (by this researcher). Thus, a (non-descriptive) phenomenological study is broadly consistent with a constructivist worldview.

3.2.4 Why Phenomenology?

Phenomenology is at once a paradigm and research design. As a philosophy, it was developed in the geopolitical context of World War 1 by the German philosopher Edmund Husserl (1859 - 1938); its origins can be traced further back to Kant and Hegel. The concept was developed further in the early 20th century by Martin Heidegger (1889 - 1976), amongst others. After initial success, the approach was largely forgotten until the 1970s when a praxis was established (Stones, 1988, as cited in Groenewald, 2004). Broadly speaking, phenomenology focuses on the meaning of human experiences; thus, it helps explore fundamental questions concerning the meaning of experience – the what and how of human experiences as related to a particular phenomenon. Hence, it can be easily seen why it is attractive to researchers in education and social sciences.

Formal definitions of phenomenology are multiple; indeed, its essence is still debated in the philosophical community. Nonetheless, for this discussion, the following definition from the online Stanford Encyclopaedia of Philosophy (Smith, 2018) may be considered archetypical:

> Literally, phenomenology is the study of "phenomena": appearances of things, or things as they appear in our experience, or the ways we experience things, thus the meanings things have in our experience. Phenomenology studies conscious experience as experienced from the subjective or first person point of view.

Several flavours of phenomenology have evolved, for example, hermeneutic and transcendental. For a treatment of these from an ontological, epistemological, and methodological perspective (see e.g. Neubauer et al., 2019).

There is a rich literature corpus in phenomenology, developed over an extended period; in contrast, there was a relative paucity of literature that documents best practices and techniques when utilising phenomenology as a paradigm and research design (Groenewald, 2004). This paucity may be attributed to a reluctance to prescribe techniques and practices formally. For example, one should not seek to impose method on an arbitrary phenomenon "since that would do a great

injustice to the integrity of that phenomenon" (Hycner, 1999 p. 144, as cited in Groenewald, 2004). Indeed, the authenticity of phenomenological research methods within qualitative research is currently debated. In the view of van Manen (2017), "not all qualitative research inspired by phenomenology is phenomenology" (p. 777); however, he emphasises that this need not compromise the validity or importance of the research question. This willingness to impose a rigorous definition has been challenged by Williams (2021) who points out that what constitutes science is always "open to revision by the next generation of practitioners" (p. 377).

Interpretative Phenomenological Analysis (IPA) (Smith et al. 2012) is one branch of phenomenology that, in the view of van Manen (2017), does not conform to a strict definition; however, Williams disagrees, pointing out that adhering to a strict Husserlian definition is no more credible than current scientists adhering to science as interpreted and practised by Newton. In line with classic phenomenology, IPA focuses on the individual's perception or personal account of an experience, as distinct from seeking to objectify the experience. However, it acknowledges that researchers' conceptions are at once a necessity and a source of bias as they seek to gain an insider perspective. Likewise, the participants are, in parallel, trying to make sense of their world and explain it. Thus, interpretation is a two way-way process, or more formally, a double hermeneutic.

In contrast to classic phenomenology, IPA is comfortable with detailed questioning. IPA's acknowledgement and even prioritisation of the need for sense-making, both on the part of the participant in the study and researcher, made it a particularly suitable method for this study. Overall, IPA is considered flexible and versatile, but where researchers "are advised to take active steps to give voice to the experiences of the participants, followed by sufficient interpretation of their narratives" (Tuffour, 2017, p. 5).

3.3 Research Strategy

3.3.1 Participant Sample

Participants were recruited via non-random purposive-convenience sampling; such sampling is a combination of purposive and convenience (Andrade, 2021). Referral was by people who have a professional interest in TL and who are known to this researcher. Two international initiatives were approached when considering potential participants. The first is the Copernicus Alliance[1] , a network of European educational institutions focusing on sustainable development. This network has a particular interest in higher education for sustainable development; however, it takes a holistic view that encompasses the institution rather than sustainability as an academic discipline. Members come from diverse backgrounds and institutions. The second network consulted was Legacy17[2], an international social enterprise concerned with the realisation of the 17 SDGs. This network leads an Erasmus+ initiative concerned with online Transformative Learning (OnTL). Potential participants were identified from the Higher Education Summit 2020, organised and run by the Copernicus Alliance. The Legacy17 team provided an opportunity to address their OnTL team, inform them about this study, and request volunteers.

There is no absolute or ideal number of participants in a phenomenological study. The most important feature is that all participants have had meaningful experiences of the phenomenon under investigation. Creswell and Poth (2017, p. 76) advise identifying a heterogenous group of between 3 to 4 individuals or 10 to 15. In contrast, Smith et al. (2012, p. 54) recommend smaller groups for IPA studies to focus on a detailed study of complex individual experiences. They further note that it is more difficult undertaking such a study with a large group than a smaller group. Thus, they advise between three and six participants, noting that experienced IPA researchers tend to work in this range.

[1] Copernicus Alliance - https://www.copernicus-alliance.org/
[2] Legacy17 - https://legacy17.org/

For this study, seven participants contributed. Five were female; two were male. Six are based in mainland Europe; one is based in Australia. All taught in higher education establishments. All participants had practical experience of TL when teaching sustainability either as a separate subject or jointly with another subject. All participants confirmed details of their experience before the interview.

3.3.2 Ethics

Best practice on research demands full consideration of the ethical dimension of all research initiatives. In this study, human participation is essential; as such, ethical considerations are a necessity. Guidelines for best practice are well-documented at the international, national, and institutional levels. At the EU level, the European Code of Conduct for Research Integrity (All European Academies, 2017) constitutes a self-regulatory framework across all disciplines and research settings. The code was revised in 2017 to cater for challenges continuously emerging from technology and society. Today, this code is considered the definitive reference document for research integrity across Europe. Reliability, honesty, respect, and accountability are considered the underlying fundamental principles.

For most Irish researchers, institutional offices are the primary source of advice and ethical approval; such offices invariably develop specific policies to safeguard rigour and integrity in all research efforts. In this way, the institution can ensure compliance with the necessary ethical, legal, and professional requirements. In the case of the National College of Ireland, the principles of the College's Ethical Code for Education Programmes Research were adhered to; these principles are noticeably influenced by guidelines from international educational research associations, including the European Education Research Association (EERA)[3].

After considering the National College of Ireland (NCI) ethical guidelines, approval was sought for this study. In making the application, the research design was described, and a detailed plan for data

[3] European Education Research Association (EERA) - https://eera-ecer.de/

management was prepared. Specifically, the steps for identifying and approaching potential participants were defined. Crucial to these steps is obtaining consent and the management of personal data such that confidentiality is ensured. In particular, issues pertaining to the dissemination of results were considered. A firm commitment to avoiding the use of video, audio or photographic data was given. Moreover, participants were assured that while the use of select quotations was unavoidable in a study such as this, attributions would be suitably anonymised. In summary: the parameters governing this study are relatively standard; no vulnerable person or child incapable of giving consent were involved. Indeed, all participants would, by their profession, be familiar with the requirements of researchers and obligations of participants; thus, the overall ethical risks intrinsic to this study was significantly reduced but not eliminated.

Ethical approval is a binary decision; it may be regarded as a stop-go decision from a classic project management perspective. However, it is not constrained by time. It is impossible to predict what will emerge as a study proceeds. Emergent design is synonymous with qualitative research; thus, it is essential to ensure that the conditions attached to ethical approval are not materially contravened. More challenging for the researcher is addressing the difficulties and assessing subsequent ethical implications that may arise during a study and what unintended consequences might result for all parties. Two approaches were adopted to mitigate such potential issues. All participants had the right to withdraw. Subjects could withdraw after seeing the transcript of their interview; in this way, they had time to reflect on what they had said, possibly correct or redact some information, or just request their withdrawal and the destruction of all data. Secondly, it was agreed to provide the results to them on a confidential basis. For this study, the principles described in the research ethics handbook (Boddy et al., 2010) proved invaluable.

3.3.3 Data Collection

After identifying potential participants, an email template was prepared; this email introduced the researcher and allowed participants to read about the study in detail and how they might

contribute. If interested, potential participants were invited to respond positively. A full copy of the interview protocol and interview form was then provided. On returning a signed consent form (Appendix IV), an interview was scheduled. The duration of each interview was one hour; in practice, this was 45 minutes as five minutes were allowed for scene-setting and ten minutes at the end for debriefing and answering any questions or clarifications requested by participants. Notes were taken during the interview. A transcription of the interview was then prepared, and participants were given the opportunity to amend it. All participants availed of this option. On confirmation that they agreed with the transcription, participants' role in the data collection process was complete.

All interviews followed a semi-structured format (Magaldi & Berler, 2020). Such a format is particularly useful when there is only one opportunity to conduct the interview. A series of open-ended questions (Appendix VI) was prepared, and this was used to guide the interview. A copy was provided to interviewees in advance. While the structure was adhered to, opportunities were availed of to ask for additional questions or clarifications. The advice of Guerrero-Castañeda et al. (2017) for conducting phenomenological interviews was followed. Consecutive interviews were not undertaken; furthermore, all moral judgements and preconceptions were set aside by the researcher for the duration of the interview. Some time was allowed between the interview and the transcription (24 hours). Some contextualised questions and prompts were identified as experiences cannot be meaningfully separated from context and biography (Bevan, 2014).

In harnessing semi-structured interviews for phenomenological studies, there is always a risk that openness to the phenomenon under investigation is compromised. In the case of IPA, semi-structured interviews are encouraged with a small homogenous participant sample such that convergence and divergence can be examined in detail (Smith et al., 2012, p. 3). All participants sought to express their conscious experience of the phenomenon through English – a second language for all except one participant.

Interviews were conducted online due to the prevailing Covid pandemic; data management followed the plan outlined in the NCI ethical approval submission and the Information Sheet (Appendix IV) circulated to the participants beforehand. The online video platform used was Zoom. The presence of an icon on the screen alerted participants as to when the recording was active, making the process transparent. On completion, all recordings were stored on a secure, password-protected server. When preparing the transcripts, recordings were only accessed and processed in a private area. Transcripts were manually prepared and edited in MS Word. All transcripts were prepared on a password-protected, encrypted laptop and were thus only visible to this researcher. During transcription, any potentially identifying data identifying the participant or their institution were removed. Transcripts were sent via a password-protected email account to participants for review and sign-off. When using MaxQDA for analysis, all files were stored locally on the laptop. Nobody except this researcher had access to the laptop.

3.3.4 Phenomenological Considerations for Data Analysis

In describing the approach adopted for data analysis in this study, the sage advice of Braun and Clarke (2021) is noted, that there is rarely one ideal method (or methodology) for a research project. However, it is useful to reflect on some issues pertaining to the data analysis process for phenomenology studies before formally defining the steps. In the first instance, the four philosophical perspectives in phenomenology should be kept in mind (Steward and Mickunas, 1990, as cited in Creswell & Poth, 2017, p. 75). Firstly, phenomenology was conceived in response to empiricism and scientism that dominated in the late 19th century that sought to return philosophy to its roots in Greek philosophy to search for wisdom. Secondly, phenomenology seeks to suspend judgements on what is real until a credible basis is found. Thirdly, the notion that consciousness is always directed towards an object and that reality of an object is inextricably linked to one's consciousness of it. Finally, the reality of an object can only be perceived through the meaning of an individual's experience.

In practice, the need to suspend judgement was the most challenging. The objective is to prioritise describing the experience of participants while minimising the interpretations of the researcher. Husserl considers this process, referred to as "bracketing", as essential. One approach that helps researchers is to document their own experiences with the phenomenon under investigation and thus bracket their views before seeking to consider the experiences of others anew as it were.

For IPA, the focus is on a particular phenomenon, the particular group of people and the particular context but with an omnipresent awareness of the double hermeneutic. Moreover, the emphasis is on its analytic focus on how participants make sense of their experiences. There is no definitive method for analysis; instead, flexibility is encouraged, enabled by iterative and inductive cycles.

3.3.5 Data Analysis

Thematic Analysis (TA) is a long-established method for the analysis step in qualitative research, including phenomenological studies. Analysis is obviously a fundamental step in IPA studies. Nonetheless, there is no prescribed method for working with data proscribed by IPA, contrary to expectation. A suite of steps is proposed by Smith et al. (2012) but these are not definitive. In IPA, analyses are regarded as iterative and inductive (Smith, 2007). It is helpful to regard IPA as a phenomenological methodology or framework, although it might be considered as epistemology, with its own philosophical concepts. Thus in undertaking a TA, the methodological approach proposed by Braun and Clarke (2006) may be adopted but only with modification. Each particular case must be examined in detail first. Only then is a cross-analysis undertaken. This differentiation from the steps of classic TA is of fundamental importance, representing the critical difference in terms of method. Overall, it is plausible to assume "that TA and IPA work well together" (Spiers & Riley, 2019, p. 287).

Stage 1: Familiarisation with the transcripts

Transcription of the audio recordings represented the first step in this stage. Transcription is a time-consuming process; it is also frustrating and error-prone, in my experience,

reinforcing the insight of Smith et al. (2012) concerning operating with a small number of participants. The focus was on a verbatim replication. Non-verbal utterances were observed during the interviews; in IPA, these are important in so far as they relate to the phenomenon, not the participant in the study – the focus must always be on the participant's experience (the ideographic dimension of IPA). For this study, transcription was not recognised as an "interpretive act" (Braun & Clarke, 2006, p. 87). Instead, the objective was to compile a transcription that was faithful to the participants' voices. Only when the transcription was completed and signed off by participants was a process of active and repeated reading, augmented with cross-checking of the audio, commenced, and notes prepared. Initial ideas for codes and themes were recorded using a traditional paper and marker approach.

Stage 2: Developing of emergent themes

All interesting items from the full dataset for one participant was systematically identified and coded. Where possible, the context was maintained. Where appropriate, data were coded multiple times. A guiding principle was that contradictions and inconsistencies were to be expected. Moreover, data and codes that seemed to diverge from provisional emergent themes were explicitly retained.

Stage 3: Search for connections across emergent themes

Here, potential relations between codes, sub-themes and overarching themes were explored. No code was discarded; codes that did not align with any emergent category were retained for further consideration under an umbrella outlier theme. In searching for themes, the scrutinising techniques of Ryan and Bernard (2003) were followed; these techniques include looking for repetition, indigenous typologies, metaphors and analogies, and theory related material.

Stage 4: Moving on to the next case

Here, steps 1 to 3 were repeated. This exercise was undertaken by treating the case on its own terms and acknowledging its uniqueness while "bracketing" the outputs of the previous case.

Stage 5: Looking for patterns across cases

This stage focuses on developing coherent patterns across cases; again, it is both an iterative and inductive process. The first step constituted reviewing the themes and codes and assessing them for coherence, including reconfiguring and relabelling. A potential super-ordinate and nested thematic map was produced. This map was then systematically considered in its totality, and its coherence was confirmed. For this stage, the advice of Patton (1990, as cited in Braun & Clarke, 2006) is particularly apt – themes should be judged by their "internal homogeneity" and their "external heterogeneity". Furthermore, their caution to stop the refinement process once nothing of substance was being added was strictly adhered to.

Stage 6: Produce the report.

This stage comprises the final analysis and writing up of the final report, in this case, chapter 4. The objective here is to tell the complicated story of the data in a coherent, exciting but convincing manner. When producing the chapter, the advice of Bazeley (2013, as cited in Bryman, 2016, p. 587) was to the fore; the significance of identified themes, their interrelationships, their implications, and their relation to the literature were guiding principles.

3.4 Rigour & Quality

In this section, I considered issues pertaining to trust, the limitations of the approach, and my own role as a researcher.

3.4.1 Trust

Markers of high-quality research permeate the entire research process. Qualitative research raises challenges due to the diversity of paradigm, epistemology, and ontology. One well-established set of criteria for evaluating the trustworthiness of qualitative research is that of Lincoln and Guba (1986). While noting the evolution of these criteria since the 1980s, four core criteria remain central:

1. Credibility – the confidence that can be placed in the veracity of the research findings.
2. Transferability – the degree to which the results can be transferred to other contexts.
3. Dependability – the stability of the findings over an extended period of time.
4. Confirmability – the degree to which the findings can be confirmed by other researchers.

Table 3.1 outlines where these criteria are addressed in this study.

Table 3-1: How trustworthiness is ensured in this study.

Criteria	**How the criteria are addressed**
Credibility	The justification for the alignment of the underpinning theory, research question is given in Section 3.2. The sampling strategy is outlined in Section 3.3.1. The process for analyses, outlined in Section 3.3.4, is well-established in the literature.
Dependability	All procedural steps in this study are documented, allowing replicability of this research, subject to access to the same dataset. The omnipresent triple hermeneutic in this kind of study strongly suggests that other researchers might reach different conclusions.
Confirmability	Findings are presented comprehensively through thick descriptions and apt use of quotes.
Transferability	Within the boundaries of GDPR, the prevailing context is factored into the findings in Chapter 4.

A further important aspect of quality research concerns reflexivity; indeed, the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist (Tong et al., 2007) further emphasises reflexivity as a quality dimension that should be reported upon so that independent researchers can critically assess how those factors might have affected both observations and interpretations. For this study, all participants were informed of the motivation for this study in the introductory email (see Appendix III). Furthermore, motivation was emphasised before the online interview. As the participant cohort were active professionals in HEIs, they understood the motivations (and protocols) for studies such as this. In practice, ensuring good quality is also a result of somewhat mundane choices in the course of this study. Thus, the researcher i) personally transcribed the data; ii) ensured that participants had ample opportunity to review and sign off on the transcript; and iii) verified that all recordings were maintained, in compliance with GDPR and ethical guidelines, for subsequent consultation and clarification.

3.4.2 Limitations of the Methodology

There are several limitations intrinsic to any research design – this study is no exception. Well-known limitations of qualitative research include the lack of objective verification, its labour-intensive nature, and a need for skilled interviewers (see e.g., Choy, 2014). For this study, the researcher makes no particular claim to being a skilled interviewer. Semi-structured interviews may limit participants' openness to a phenomenon. Such interviews predefine a set of concepts or themes when exploring an arbitrary phenomenon; preconceptions invariably influence such concepts.

Language aggravates the ever-present hermeneutics dimension of this study – English is a second language for all but one of the participants. No difficulty was encountered. I observed that participants thought carefully about their responses and paused before replying. However, participants generally expanded on their comments and often made significant effort to clarify them. Nonetheless, an extra level of care and diligence is demanded during the interpretation process.

3.4.3 Role of this Researcher

I have no practical experience of Transformative Learning either as an educator or a student. Thus, in a spirit of reflexivity, I consider myself an outsider in the context of the classic insider-outsider epistemology of qualitative research. I acknowledge my previous experience as a lecturer in a HEI; likewise, I acknowledge my current role as a senior researcher. My overall interest is to assess the viability of TL as a pedagogy in HEIs as I consider many conventional approaches unsatisfactory. In the case of sustainability, I acknowledge its importance going forward; however, my professional and personal interests in sustainability topics are on a par with that of the average layperson. As per my role as a professional researcher, reflective practice is important to me. Likewise, I am acutely conscious of the risk of unconscious bias in all my actions, including the undertaking of this study. In the spirit of the constructivist paradigm underpinning this study, I acknowledge the existence of multiple realities and perspectives. Thus my interpretation and discussion of the results of this study are not presented as definitive; rather, they represent one possible interpretation – one that is invariably influenced by my positionality.

3.5 Conclusion

This chapter outlines the methodology identified by this researcher for answering the research question that motivates this study. A detailed description and justification of each step are provided to maximise rigour and generalisability. External researchers are provided with sufficient information to ensure replicability. Likewise, disinterested but professional readers can assess for themselves the plausibility of the methodology. In the next chapter, the results of the study are considered.

Chapter 4: Results & Discussion

4.1 Introduction

This chapter presents and discusses the results of the analysis. Four superordinate themes emerged from this analysis. Within each of these, clusters of three or four nested themes were developed. Initially, the participants' experience is prioritised. In the second part of the chapter, the focus shifts to the interpretation of the collective experience.

4.2 Overview of the Emergent Themes

In presenting these results, the needs of the reader and their vital role in the hermeneutic dialogue is acknowledged. Thus, the discussion is structured to achieve an effective balance between the voice of the participants and the interpretations of this researcher such that the reader can make their own informed judgement. A "case-within-theme" approach is adopted as the research question prioritises the collective and commonalities rather than, perhaps, the diversity of experience (which is in itself an exciting research question). Superordinate and nested themes are summarised in Table 4.1. It must be noted that although the themes are presented as discrete, some overlap occurs.

Table 4-1. Summary of Superordinate and nested themes.

Superordinate Themes	**Nested Themes**
Role & identity – Lecturer? Facilitator? Co-creator? **Participants were obliged to reassess the previous assumptions concerning their**	**Background**: Here, participants' journey to TL is considered and triggers for embracing TL. **Nature of teaching:** As part of their respective journeys, participants reassessed their views and expectations of the teaching profession.

understanding of their profession.	**Role of the Teacher**: After reassessing the intrinsic nature of the profession, participants reflected on what applying TL would mean for their practice (the practical issues faced in the classroom are considered under Operationalising Context). **Need for support**: Adopting TL was experienced as a different or even radical choice. Participants emphasised the need for support from experienced practitioners.
Transformation in Practice **Participants were obliged to consider their understanding of the "transformative" in TL.**	**Nature of TL:** Participants confronted the meaning of transformation in TL. **Personal transformation:** Transformation is not just for others (students). Participants were obliged to consider TL within the context of their own lives. **Emotion:** TL has an emotional dimension that participants needed to understand and anticipate. **Culture:** Response to TL needs consideration to the lens of culture.
Operationalising Transformation **The practical application of TL on the ground posed many questions.**	**University:** Participants pondered whether TL aligns with the mission of a modern HEI or university. **Students:** Strategies for mitigating students

	concerns needed consideration. **Online delivery**: Participants were obliged to consider the implications of TL in online contexts.
Transformation for ESD **Participants reflected on their experience of ESD.**	**Nature of sustainability:** Participants developed a more complex model of sustainability. **Personal responsibility:** Sustainability is not an abstract concept; rather, it has a personal role. **Possible futures**: The future is intrinsic to ESD.

4.2.1 Role & identity – Lecturer? Facilitator? Co-creator?

This superordinate theme explores how participants were obliged to radically reflect on their professional role and identity as they journeyed towards TL. Such reflection engendered a transformation in how participants viewed themselves as professional educators.

Lecturers' journeys to TL were diverse. One common thread that emerged was one of transdisciplinarity. P06 categorises herself as *"…a transdisciplinary researcher…"*; P02 sees herself operating "…*at the interface of sustainability science and educational research…*". Motivations for adopting TL varied amongst participants. For P05, it was a case of experimentation with a methodology to make classes more interesting for students. In contrast, it was more a question of what pedagogies are best for sustainability for P06. Elsewhere, an acute awareness of a need for behavioural change developed, and the possibilities of TL emerged in response to a realisation that *"…people don't know how to change, or they don't want to change or they're afraid of changing…*" (P02). However, such observations can be made of lecturers as well. Thus, behavioural change is not

a learning outcome per se; rather, it is transversal, demanding deep self-reflection on the part of the lecturer. In summary, the lecturer could be:

> *…a person who's deeply engaged in the practice of transformation, and both at the thinking level but also at the embodied level….*(P07).

TL requires a radical reconsideration of the lecturer's role in the classroom. Initially, a need emerges to make lecturers' pedagogy explicit. In the first instance, lecturers should acknowledge that "I […] *do not see myself as the knowledgeable person who knows everything…"* and that TL "*…goes beyond knowledge transmission*…" (P04). Furthermore, it is argued by P03, that *"…transformative learning processes can only be enabled…"* and that I can only *"…create some rooms for it*". As students are unlikely to have encountered such a pedagogy previously, P06 advises making a "*…pact…*" with the students; in addition, lecturers should develop and promote an "*…experimental attitude to learn together…*" (P03). P04 concurs, seeing learning as a collaborative process, and one that gives *"…way more opportunity to learn together with the students…*". Thus, lecturers must resist the temptation to immediately give the information that students request; instead, the lecturer must see themselves more as facilitators. Likewise, students must also understand that the role of the lecturer is no longer one of information transmission.

Challenges for lecturers in adopting TL are many. The first was alluded to earlier, that of changing role from being the in-situ expert to one of *"…learning and coaching facilitation…*" (P04). P07 goes further, noting that lectures must be prepared to learn through collaboration and cocreation, drop the "*…authority dimension…*", but more problematically, overcome the omnipresent fear that "*… they're going to be found out to be frauds…*". All of which is challenging for academics who enter the profession from a relatively young age and may not have a substantial breath of life and teaching experience to draw on. P05 focuses on the practical issues of career development, noting that students' feedback has implications and ramifications for tenure and contract renewal.

Managing student expectations and needs remain fundamental, irrespective of pedagogy or subject. Once fees are paid, students may adopt a customer mentality and expect, in the experience of P06, "…*predigested…*" material. However, what concerns students most is their final mark; P05 advises having all planned activities "…*well defined in terms of their weight in the final score of the subject…*". Such planning alleviates the inherent problem identified by P04 that transformative processes cannot be graded as they are such "*...an individual process…*". If students are not happy, their evaluation and feedback will be negative. Furthermore, lecturers may, in the experience of one participant, be accused of "*…indoctrination…*".

In adopting TL, participants were working in isolation. An acute need for support and encouragement was widely acknowledged. Joining a professional network, of which there are many, was considered essential. Indeed, the Copernicus Alliance and Legacy17 are exemplars of such networks or online communities. Participants noted that plenty of resources existed for anybody considering adopting TL; Books, articles, YouTube videos, and TedX talks were all highlighted. This desire for access to like-minded communities for support also extended ESD.

4.2.2 Transformation in Practice

Participants were obliged to confront the intrinsic nature of transformation and consider how the adoption of TL would be manifested in practice. Such manifested is not limited to the classroom or lecture theatre; there is a deeply personal and human dimension to TL that emerges and must be understood.

Participants confronted the essence of TL. In the view of P06, it is "*…a long-life process …. that requires a contained and continuous dynamic…*" or "*…a different ontology of human being…*". For P01, it is a "…*conversation with students*…". Such differing views are acknowledged by P02, who perceives a lot of confusion about what TL actually is, a fact she attributes to the broad range of practices and methods adopted by TL practitioners. The need for a safe space is a prerequisite for

P04 because *"…you touch vulnerable topics, or you discuss about so many things that go way beyond knowledge and go to the values…*". In the case of learning outcomes and metrics, P03 perceives increasing reflexivity as the most significant learning outcome of TL. But such a learning outcome is not limited to students – it is vital for the lecturer as well.

One natural outcome of sustained reflexivity is that of personal transformation. It might be argued that life itself is a transformational process; in the view of P02, confusion may result as *"…you don't know where you are in the transformation process*…". However, lecturers must be open to their own transformation if they seek to engage in TL; in the view of P04, lecturers must not necessarily just be prepared to change but expect to be changed as a mere result of just engaging in TL. Thus TL, as perceived by P03, represents a "…*deep structural shift in our mindsets…",* our relationships to the environment, other people and ourselves. However, TL is not just limited to the cognitive; rather, it also has emotional, embodied, psychological or even psychic aspects. Personal transformation is, in the view of P01, a prerequisite for personal sustainability.

Emotion is perceived by P07 as a critical element of *"...what we call the transformative…*". Likewise, P04 see emotional stability as a prerequisite for student engagement in TL processes. This need is accentuated in the case of sustainability in the experience of P03; when faced with climate changes or global injustice, students risk being overwhelmed with sadness and grief, especially if they consider themselves part of a world responsible for such situations. However, this should not deter the lecturer, in the advice of P04, from "*…integrating some emotional or some embodied exchange processes or exercises…"* into their praxis. In this way, TL becomes dynamic and multifaceted:

> *… it's always about experiment, experiencing things, about acting things out and also about connecting to emotions and the feelings…* (P04).

Furthermore, TL in online contexts does not negate the emotional dimension; in the view of P02, it enables the sharing of emotions, not because they are remote but rather because the students are in a familiar environment and thus a safe space.

Culture is perceived as intrinsic to transformation; increasingly, student classes constitute many nationalities, cultures and languages. Many students may be accustomed to very formal teaching processes where hierarchy and memory dominate. Thus TL needs to be adaptable, all of which poses particular challenges. For example, some cultures are comfortable talking about personal issues; other cultures are less comfortable. Moreover, students may find voicing criticism and even their own opinions challenging:

> *… it's way more difficult to engage in transformative learning processes because it's nothing that they are used to and voicing something critical, for example, our own opinions, are often not asked for in classes…* (P04).

It should be noted that when students study in different cultures, they may view their own culture through the context of the current culture where they are living and working. Thus, a transformative process may already be initiated.

4.2.3 Operationalizing Transformation

Operationalising TL on the ground posed many practical challenges as might be expected. At the heart of this was an obligation to reconcile TL with the university's mission and with the institution's practical constraints. On the ground, however, it demanded confronting, addressing and mitigating students' concerns.

What constitutes a university continues to preoccupy academics and society (see e.g., Newman, 2008). Both sustainability and TL contribute to this discourse – one that remains active while always seeking to crystallise the purpose of the university and higher education:

> *…because it's always a little bit like what is the role of the University…* (P04).

P02 agrees, seeing the university as a place where "*… I can make a difference...*" but also "*…serving society and the world…*". Society often perceives a disconnect between academia and the real world. Both sustainability and TL are perceived by P03 as challenging this disconnect, acknowledging an

acute need for an awareness of "*…what other kinds of epistemologies are in the world outside our academic ivory tower…*".

Implementing TL within HEI structures poses its own challenges. A fundamental question arises as to whether TL is a classical pedagogy or, indeed, something else. P04 sees TL as being primarily applicable in the area of self-development; such a view chimes with Mezirow's model. This view naturally raises the question as to whether TL should or even could take place with a HEI, again querying the role of a university. P03 reinforces this view, observing that TL processes are *"…self-regulated and self-organised…*", thus challenging models of time-constrained, exam-focused lecturing. On the ground, the practical difficulties of implementing TL are noted by P05; such difficulties are not unique to TL, encompassing class size, classroom layout, and timetable constraints. Overall, one key advantage, however, was the possibilities offered by TL to enable discussion in the classroom about controversial issues, for example:

> *…what are our transformation strategies towards a sustainable society? who's involved with which interests? which power position?...* (P03).

Students find TL challenging as they expect a conventional approach of knowledge presentation via software, such as MS PowerPoint™, followed and a question-and-answer session. So introducing TL poses difficulties as "*… they are quite unfamiliar with such a kind of learning journey…*" (PO3). Thus students are "*… out of their comfort zone…*" (P02), resulting in doubts, confusion and criticism. Introducing group work can be a revolution, and students "*…rebel because somehow they lose control of their own scores…*" (P05). In the experience of P04, the need to share feelings is something that they are not used to in a traditional university setting and one that students need to become more comfortable. However, it is crucial as students and groups of students can be at different stages of the TL process and thus have different needs regarding attention, guidance, and support.

Similar to lecturers, many issues can be attributed to an inherent change in role. Students move to "*…being co-creators of their own learning…*" (P02), and assuming responsibility "*…for their own learning process…*" and "*…creating this culture of appreciation and respectfulness together…*" (P03). In the case of projects, students are encouraged to *"…develop own projects about sustainable issues to make the world a little bit better…*" (P04). The most difficult challenge demands inducing a "click*"* in students' minds:

> *You are not going to give me the information, so I need to know what it is that I want to learn in this course.* (P05).

Online learning has become commonplace because of the Covid pandemic. Many challenges arise at the institutional, lecturer and student levels. As highlighted by P02, there is a need to emphasize to staff "*…that everything that we do offline we can do online as well…*". P01 likewise encountered no difficulties in engaging with students via email; online consultation became routine, and the students then "*… produce what is required…*". However, the difficulties in making the change from the traditional approaches are real and acknowledged:

> *If we do that, that archaic form of learning of course is going to fail in an online environment because the online requires a much more dynamic, flexible approach.* (P07).

Overall, no major obstacles were foreseen as to why TL would not work in online settings. P07 attributes this to the relational nature of TL, noting that *"…all it needs is a device that fosters relationality…*". The ubiquitous laptop may be perceived as such a device. While the perceived remoteness of the student might raise some difficulties, certain advantages can accrue from such remoteness. P04 observed that some students seem more engaged and more secure in online

contexts. Moreover, P03 sensed that students could become more trustful and "*…more oriented towards really real dialogue…*" which is a prerequisite for TL.

4.2.4 Transformation for ESD

In this theme, participants confronted the implications of TL for the ESD. Again, the nature of sustainability is reconsidered and a coherent though sometimes diverse understanding emerges. Like transformation, the personal dimension cannot be decoupled. Interestingly, the future, or possible futures, were core to ESD.

Sustainability is complex and is especially challenging for both students and lecturers. As noted in Chapter 2, sustainability comprises not only an environmental dimension but also the economic and social; each dimension must be looked at in ESD, and participants manifested an acute awareness of this need. However, some adopted a more holistic view. P04 views sustainable development as intrinsically a "*…transformative societal learning process…*". P07 views sustainability first and foremost as "*…a question of our relationship…*" rather than a question of an ecological or economic nature.

Personal responsibility is seen as intrinsic for sustainability; for P06, TL is seen as an enabler of that change of view of oneself and of the world that is a prerequisite for sustainability. In this way, one must:

> *…look at your own habits in terms of how can you kind of […move…] towards a sustainable lifestyle and how can you change these habits and personal Lifestyle behavior that you have…* (P02).

A change of life emerges from such an exercise, resulting in oneself being "*…modest with consumption of all kinds of materials, energy, Information and so on …*" (P01). For students, it is a question of exposing them to problems of sustainable development and encouraging them to

explore ways of solving or reducing these problems. P01 has found that asking students to measure their own carbon footprint, compare it with national or international averages, and propose ways of reducing their footprint as being valuable exercises for students.

The future is intrinsic to sustainability and is core to many activities undertaken by participants. P01 advocates grounding this discussion initially in terms of climate change, biodiversity and initiatives such as the EU Green Deal but also in terms of practical issues facings society such as the healthy aging problem. However, rather than focus on knowledge transmission or facts, P04 sees TL in sustainability as being "*…about getting the confidence and competencies to critical reflect to be able to envision new futures …*"; thus, imaginary exercises about possible futures are encouraged. For P06, such imaginary exercises should include the "…*impossible future*…". Finally, in the context of TL, the following observation is summative:

> *There are many futures and the transformative is the space in between.* (P07).

4.3 Discussion

Having prioritised participants' voices above, the results are now considered through the voice of this researcher but, moreover, through the context of the research literature. However, the tantalising and elusive nature of experience and the second-order sense-making implicit in IPA needs to be kept in mind

Participants respective journeys to adopting TL all differ, but the motivation was broadly similar. It was increasingly recognised that what was considered conventional best practice was, in fact, insufficient. One step towards such a realisation may be regarded as a result of a number of years of practice from which a wealth of experience informs the lecturer about what works - in the classroom, for particular student cohorts, and for the particular topic being taught. Such experience challenges the lecturer to both question and to challenge themselves, especially in terms of their practice, as what may have been attractive and sensible at the start of their career may no longer

suffice. Such self-analysis has all the characteristics of reflective practice and reflexivity (see e.g., Borie et al., 2020; Ryan & Murphy, 2018; Kreber, 2012)

A second insight emerged from the nature of the topic being taught, namely sustainability. Inherent within sustainability is a need for action. Participants who had taught topics with a solid sustainability component followed this route to TL. They realised that conventional approaches in their didactic and pedagogical dimensions were insufficient, given the nature of the topic. Such a realisation might indeed be termed transformative, although no participant characterised it as such. Recalling the contexts in the HEIs is instructive at this juncture. Two approaches to including sustainability in curricula are generally adopted (Weiss et al., 2021). In the first instance, sustainability topics are "bolted on" to pre-existing modules; this is the approach adopted by P05's and P06's institutions. Alternatively, topics and modules are distinctly constructed around sustainability topics, as is the experience of P02 and P03. In practice, a mixture can occur in one institution. This call for action is not necessarily a singular characteristic of sustainability; rather, it may also be attributed to an obligation on the part of the lecturer to practice what they preach and to be seen to do so in the eyes of their students, and perhaps to a lesser degree, in the view of the colleagues and institution. Interestingly, the call for action is consistent with and implicitly grounded in transdisciplinarity (Knapp et al., 2019). It transcends disciplinary boundaries, focusing on real-life, complex problems and is intrinsically solution-focused (Hoffmann et al., 2017).

Both routes to TL are characteristic of reflective practice. Reflective practice was conceived in the early 1070s and "*…is a dialectic process in which thought is integrally linked with action…*" (Osterman, 1990, p. 134). Though readily adopted in education circles and representing a significant advance in professional education, reflective practice is ubiquitous and can be applied in any professional activity. Moreover, it constitutes a critical dimension of many teacher education programs (Mulryan-Kyne, 2020). In the context of this discussion, the definition of Miciak et al. (2021) is more apt, enabling professionals to "…*expand their assumptions, change behaviour, and*

align practice with their values and beliefs…" (p. 96). Loughran (2002) highlights time, experience and expectations as essential elements of reflection. Furthermore, he notes that reflective practice constitutes a spectrum ranging from thinking to action and emphasises that framing and reframing problems are an essential prerequisite for reflection that leads to practical courses of action. Though participants never explicitly referred to reflective practice, it can be conjectured that this concept influenced them. Fuertes-Camacho et al. (2021) view reflective practice as key to education for sustainable development; however, they limited their discussion to pre-service teacher training but the possibilities offered by introducing all sustainability students to reflective practice merit further consideration.

4.3.1 Transforming the Educator

As outlined in Chapter 2, TL is a theory of adult education; however, its implementation is diverse. For the teaching professionals contributing to this study, it was necessary to consider and understand the essence of TL before it could be fruitfully harnessed in the classroom. No participant recalled any of their own lecturers engaging in TL. However, one recurring theme was a need to make their pedagogy explicit to the class, though, of course, this was phrased in accordance with the class background so as not to overload students with additional terminology and concepts. Participants' rationale was that students would not have experienced any variety of TL previously and that they should be forewarned that the lecturer was adopting a different approach. Ultimately, participants needed to reassess two personal issues radically - i) their own understanding of TL, and ii) how adopting TL would affect themselves both as individuals and as professionals. In this way, participants were reflecting, reformatting, and refining their identity as lecturers (Illeris, 2014; Hegarty, 2008).

TL encompasses many opportunities for lecturers; no participant regretted adopting TL or planned on replacing it with another pedagogy. However, a deep understanding is a prerequisite; but acquiring such an understanding can be problematic due to the diversity of interpretations of TL

currently in existence (Anand et al., 2020). TL differs in one fundamental way from other pedagogies; TL is not just for students but also for lecturers. Like students, lecturers may not be ready; however, they must be prepared to be challenged, be open to transformation, and to change. The mere process of engaging in TL, ideally augmented with sustained reflexivity, will induce transformation; thus, lecturers must not just be prepared to change - they must expect personal change. Such observations are consistent with the case study in Plymouth (Blake et al., 2013), where staff advised being comfortable with the uncomfortable.

Lecturers are generally tasked with bringing a student from Point A on an arbitrary domain knowledge scale to Point B and verify that the student is indeed at Point B. Performing this task is what institutions, students, and society expect of the lecturer and represents an omnipresent context when considering alternative approaches to pedagogy. No difficulties were encountered by participants on the part of the institution. Likewise, fellow staff were broadly supportive, although their interest was limited to professional curiosity. The support of colleagues and management should not be underestimated; a lack of support can result in lecturers failing to transition to other approaches to facilitate student learning (Radzali et al., 2018). Nonetheless, in adopting TL, the role of the lecturer changes intrinsically, both internally and to a lesser degree, externally, in the lecturers' student-facing role.

Lecturers and teaching staff are often referred to as facilitators or co-creators in the TL literature. However, participants in this study never identified their job title as being a problem. However, there was a consensus that their view of themselves changed, and such a change in view could prove problematic. In essence, the lecturer must no longer view themselves as the resident expert in the classroom. Instead, they must be comfortable acknowledging that they do not have the answer to a question but also at ease in inviting the student to engage in a process of co-learning with themselves (their lecturer) and their co-students. For many lecturers, such an approach is radical in that it fundamentally changes how they see themselves, how they present themselves, and how

they relate to the subject matter, and of course, their students. In essence, their role changes from knowledge transmitters to one of enabling knowledge discovery. Adopting such a role is in itself transformative; nonetheless, lecturers find this transition difficult due to their experiences and the expectations foisted up them. Nevertheless, making this transition is fundamental if their adoption and application of TL are to be successful. Lecturers must freely, openly, and comfortably acknowledge their limitations. In doing so, lecturers can liberate themselves from their expectations of themselves and students' expectations of the lecturers' role. However, setting aside the expert profile and the implicit authority role that comes with this can be challenging for those used to such a role.

Finally, a recurring theme was the need for active support. While institutions and colleagues did not hinder participants, active support was lacking; such support was considered essential, and lecturers should not be afraid to look outside their professional circles for guidance and encouragement. All participants in this study were actively involved in professional networks; indeed, they were recruited for this study through two such networks. Furthermore, significant resources exist online for consultation.

4.3.2 Stepping into the Classroom

Introducing TL into the classroom poses various challenges. Unfortunately, the role of the teacher in the classroom is under-researched (DeAngelis, 2021). However, constraints regarding the timetable and space are characteristic of HEIs. More problematically is the response of students and its potential ramifications. Students arrive in the classroom with both education and life experience; however, they also come with expectations, and it is here that a critical problem arises. Students have no experience of TL; in all probability, they have no exposure to alternative pedagogies and may thus struggle (Joubert & Slabbert, 2017). Naturally, they expect that the lecturer will fulfil the traditional role of knowledge transmitter, contrary to TL's ethos and principles. The first challenge for the lecturer is to manage this expectation; hence, as mentioned above, participants found it

necessary to explain their pedagogy at the very start and the respective roles of the lecturer and student within this. The difficulty is exacerbated as students increasingly regard themselves as a (paying) customer and the lecturer's role as a service provider.

In the classroom, two additional elements were identified for consideration when applying TL. The first element concerns the need for an acute awareness of and sensitivity to culture. Students from certain cultures will be used to a rigidly hierarchical and authoritative structure in the classroom. Transitioning to TL poses additional challenges in that questioning, arguing and debating might be alien to them. A deeper problem arises in that deep reflection, including self-reflection, and the critical thinking necessary for TL may pose significant challenges. For lecturers, an acute and continuous awareness that everybody is at different stages of their transformation journey is advised. Interestingly, using online technologies was found to reduce this problem; it was surmised that students are more comfortable in their own environment and thus feel freer to contribute and share.

Emotion is now acknowledged as an integral part of TL (Mälkki, 2019); initially, Mezirow did not consider emotion but subsequently acknowledged its role in TL. Outside of TL, Emotional Response Theory (ERT) suggest that lecturers' communication behaviours can stimulate both positive and negative emotional reactions in students (see, e.g., Mazer et al., 2014); emotion has ramification for learning and memory retention (Tyng et al., 2017). One of the attractions of TL for participants is that it allows space for discussion on sensitive or controversial topics. Such topics invariably generate an emotional response; lecturers need to anticipate this and be prepared to confront it. However, emotions can be fruitfully channelled. Tillmanns (2020) advocates using interventions that actively ignite emotional responses in students as emotion can drive value clarification and initiate a process of worldview and behaviour reconsideration.

All participants were experienced in delivering TL via online means. No particular problem was encountered, and everybody concurred that online TL is viable subject to the lecturer taking care to adjust and plan for online delivery.

4.3.3 The Challenge of Assessment

Evaluation is a priority for students everywhere; TL challenges both lecturers and students, demanding they reconsider their approach to assessment. For students who are used to traditional forms of assessment, especially students in the hard sciences, a perceived lack of clarity will emerge in so far as they cannot identify a clear path towards obtaining their desired grade. In short, students may not feel fully in control of their own learning and may thus challenge lecturers on this. One approach being adopted is rubrics; here, a degree of transparency is introduced that guides both lecturer and student. However, rubrics can be problematic (Gallardo, 2020); they may be subjectively interpreted, and students can mistakenly prioritise certain elements and perhaps limit their creativity as a result. One participant refuses to include assessment in class as they feel it detracts students from critical analyses and reflection.

Assessment is inherently problematic due to the nature of TL. Transformation is not temporally bound; furthermore, transformation cannot be objectively quantified and assessed. Even though a change in behaviour is a crucial dimension of TL, such changes cannot be meaningfully and consistently assessed when viewed through the lens of competence development. It is vital that new adoptees of TL understand that assessment brings additional challenges and that a naïve or classical implementation of assessment will not suffice. One approach adopted by participants to address this problem was to focus on students' evidence of critical or higher-order thinking throughout the course. Such an approach is consistent with TL and is tractable within the constraints of the institution. Participants employed a range of techniques, including learning journals; however, how to best assess a transversal competence such as critical thinking either as a skill or a learning

outcome remains open to debate. Stimulating critical thinking for sustainability is seen as essential by many (see e.g., Thomas, 2009); thus, it is a skill equally needed by both students and lecturers.

4.3.4 Transformative Sustainability or Sustaining Transformation?

Sustainability is transversal, multifaceted, and complex (Jay et al., 2017); thus, it is an imprecise construct. The number and range of the SDG indicators is testimony to the difficulty in neatly conceptualising and defining sustainability. Each participant in this study had a different interpretation. Some were quite holistic, others more scientifically focused. Hence the intrinsic nature of sustainability makes it particularly challenging to teach; indeed, sustainability poses meta-challenges that lecturers in other disciplines do not face (Anastasiadis et al., 2020). Irrespective of pedagogy, success in the classroom is strongly dependent on the values, motivations, and capabilities of lecturers; this dependency is attributed to the obligation imposed by sustainability on lecturers to explore and reconsider their personal values.

Difficulties are exacerbated significantly for students grappling with sustainability when their previous exposure to topics is very narrow and focused, as is usually the case. Nonetheless, sustainability in its various hues dominates much of the current public discourse in Ireland and beyond. This discourse is characterised by controversy and debate, adoption of opposing positions across society, contradictions and synergies, as well as trolling on social media and even disinformation. When considered in this light, perhaps sustainability is the ideal vehicle for introducing and promoting higher-order thinking as per the upper layers of Bloom's taxonomy or perhaps the metacognitive knowledge as envisaged in the revised taxonomy.

Participants see reflexivity as central to sustainability. When considered in this light, the attraction of TL becomes obvious. However, the degree to which HEIs, as currently instantiated, are appropriate for promoting reflexivity was questioned, as was the role of the lecturer. For a fuzzy topic such as sustainability, a consensual view cannot be presented and perhaps it is better to prepare students to cope with uncertainty, divergent values, and different interpretations of problems and their

solutions. Participants unanimously saw TL as the pedagogy of choice to enable their students to better meet learning outcomes. A diametrically opposite approach, articulated by Wals and Corcoran (2006), saw sustainability as just one input for transformative learning, arguing, in a deep democracy context, that it is far more important to focus on new ways of thinking about difference rather than forging consensus. All participants in this study reported that reflexivity was integral to their professional.

An essential context for reflexivity on the part of students was the future. The future was not limited to issues such as climate change and so forth. Instead, it is about students reflecting on how the future might evolve, how this future might be better (the challenge for each generation, one might argue), and how they might actively contribute to such a future. The difficulty is that the future is at once dynamic and elusive, in much the same way as sustainability. The discourse on sustainability has continued for perhaps 50 years; however, a sustainable society as envisaged in 1995 may not be the same as one envisaged in 2015. Which vision is the best one and how this would be ascertained is open to question. As noted by Scott and Gough (2006), present expectations of the future may limit the future in that students will not be encouraged to analyse it critically. The parallels with the current obsession with training students in skills needed in the future resonate as what those skills will be is unknown and unknowable.

In conclusion: a view of TL emerges that is remarkedly consistent with that of Wals and Corcoran (2006), who envisages TL as constituting four shifts i) transdisciplinary, ii) transcultural, iii) transgenerational, and iv) transgeographical. Such a view demands a radical redesign of educational systems and one which is unlikely as *"…the academy remains notoriously stubborn in changing its unidirectional, hierarchical, and essentially reproductive approach of teaching*." (p. 105). Nonetheless, it must be observed that sustainability is intrinsic to the lives of all participants. Sustainability was never seen as an abstract concept or a subject for which the mere transmission of facts and knowledge is sufficient. It is seen as a societal obligation and collective endeavour. The

advantage for lecturers is that they are credible in that they “practice what they preach”. The downside is being subject to various accusations, perhaps indoctrination, as was one participant’s experience. For this cohort of lecturers, sustainability is indeed a “lived experience”.

4.4 Conclusion

In this chapter, the experiences of participants in this study were presented and discussed. All experiences were different; nonetheless, they coalesce around several themes central to the research question driving this study. Results were presented through two separate modalities, as it were. Initially, the experiences were presented through the lens of participants; in this way, participants’ objective and authentic voice was heard. Results were then considered through a combination of an objective reflection on the part of the researcher but within the context of the literature. Though the experiences are diverse nonetheless, several shared themes emerged. From these, the collective and lived experience can be distilled. In the next concluding chapter, the research question is revisited, and the shared experience is considered in light of this.

Chapter 5: Conclusion

5.1 Introduction

This research aimed to explore the experience of faculty in HEIs who harness TL in ESD. In this chapter, I summarise the results and consider their contribution to the research literature. Some limitations of the study are then outlined. A wide variety of stimulating avenues for further research emerged throughout this study; some of these are proposed. The dissertation is then concluded.

5.2 Summary: Addressing the Research Question

In Chapter 4, I presented the results through the participants' voices and the literature context. Here, I wish to consider the results through the lens of the research question (Chapter 2) guiding this study.

Tension, contradiction and uncertainty characterise the experience of lecturers in HEIs concerned with ESD. Respective journeys to TL are diverse but are characterised by an awareness that conventional approaches to teaching are not sufficient in ESD. It is in acknowledging this awareness that tension, uncertainty and even contradiction emerge. Indeed, such awareness began a transformative process for all participants. No participant was equipped with a toolbox of techniques and pedagogies that could immediately apply. The journey to TL was grounded in the complexity and contradictions of the sustainability concept.

Harnessing TL demands a radical reassessment of role as a lecturer; holistically, it leads lecturers to question their professional and personal identities. The immediate question faced in the first instance is what is it that the lecturer should do. By their nature, lecturers "lecture" and professors "profess". Neither approach is sufficient for TL; therefore, on entering the lecture theatre, participants were obliged to adopt a different role. Rather than acting as the in-situ expert and

focusing on knowledge transmission, lecturers must acknowledge the limits of their own knowledge. Conceptually, recognising the boundaries of their own expertise should not be difficult; but if the lecturer is not the expert in residence in the classroom, what are they? The difficulties are compounded when student expectations are factored into consideration. Thus the role of lecturers morphed into one of facilitation, co-creation and support for student learning.

In reconciling their role in the classroom with the needs of TL, participants encountered two immediate complications. Students' expectations of their lecturer would remain unchanged; thus, participants had to work closely with the students to explain how their classes would operate. The second issue confronting participants was assessment. Responsibility for assessment remains the duty of the lecturer; students could not but be conscious of this. Reconciling expectations and assessment were shared challenges faced by participants

Institutional support was lacking; likewise, colleagues did not have any practical experience in TL. While participants were not hindered in the adoption and application of TL, they were operating in isolation. All acknowledged a need for support; such support was found by actively participating in support networks, for example, Legacy17 and Copernicus Alliance. As is the experience of everybody in higher education, the Covid pandemic challenged the status quo and the modus operandi of lecturing staff. Like many others, participants moved to online delivery. No particular difficulties were encountered; however, all participants needed to refactor their course material to account for this new medium and how interaction with students would be facilitated. This process was not seen as transformative for participants or students. Nonetheless, it was observed that while the online medium invariably posed challenges, it also provided opportunities.

Participants did not subscribe to a singular view of TL; nonetheless, many grappled with the aptness of TL within higher education contexts. At an abstract level, such questioning might relate to the nature of a university, the lecturer's role within it, and what is their obligation to society, if any. A more thought-provoking observation concerned how participants reconciled the expectation for

transformation that is implicit within TL with assessment. Grading transformation is obviously impossible. Participants thus harnessed higher-order or critical thinking as substitutes; such thinking or analysis are integral both to higher education and TL as defined by Mezirow. Such an approach is well established, documented in the research literature and offers a credible and defensible framework for assessment.

Issues of culture and emotion were highlighted by some as issues of importance in the classroom; these are recurring themes in the TL literature (Anand et al., 2020). But an inherent openness to personal transformation on the part of lecturers was acknowledged. TL was seen as a lifelong process; in other words, it could not be meaningfully separated from real life. Thus, TL has both a personal and professional dimension for participants. No contradiction was foreseen; rather, it was seen as a natural result of the reflexivity demanded by TL and was not limited to its cognitive dimension. TL is both a theory of adult education and a pedagogy. However, transformation is not limited to students; participants agreed that lecturers must likewise be ready for a transformation. Such an outcome is a natural outcome of engaging in TL and one that should not be feared by lecturers.

Sustainability is complex and multidimensional. Participants agreed that students should be exposed to each of its dimensions. However, it was evident that sustainability was integral to the personal lives of participants. Thus it has an axiological dimension, and possibly an ethical one, for all participants. One recurring theme was that of the future. While participants were obviously aware of many of the environmental challenges facing the world today, their implications for the future did not dominate the thinking or their interaction with students. Instead, they saw their role as one of equipping students with the skills, especially critical reflection, such that they could face the future with confidence.

5.2.1 Contribution to Education for Sustainable Development

This study is a small-scale study. Nonetheless, it does provide insights into the potential of TL for ESD. Certainly, TL is tractable within HEIs. However, there is an onus on faculty to confront the inherent complexity of both TL and ESD. In doing so, lecturers must be prepared to reassess their role and even identity as teachers radically. Moreover, they may be obliged to respond with a revised but coherent epistemological and ontological position. The results contribute to the literature, as studies exploring the experience of faculty in ESD are rare. Many of the documented cases in the literature report a superficial use of TL in ESD (Rodríguez Aboytes & Barth, 2020), a view I subscribe to. However, this study affirms that TL can be adopted and applied in ESD in a coherent and meaningful way. Nonetheless, different theories of TL were manifested. This echoes the observations of many TL researchers, for example, Gunnlaugson (2008). Indeed, the model of TL proposed by Mezirow is not one that translates to HEIs. Overall, this study reaffirms that a plurality of TL theories permeates practice of both TL and ESD.

5.3 Limitations of this study

There are some inherent limitations to this study. In the first instance, the study is a qualitative one, and many of the problems characteristic such studies apply. However, in this study, three limitations are of interest. The first limitation concerns the participant population. The gender balance of the participant cohort was unbalanced. Likewise, the age, experience, and core subject matter expertise of participants all differed. While a normal population is not necessarily mandated, even in quantitative research, an imbalanced population can introduce biases and limitations that may not be immediately obvious but may become apparent later.

A second limitation concerns quality. No effort was made to return to the participants and ask if the researcher's interpretation was correct. Such an approach is common in descriptive phenomenological studies, for example, those who follow Colaizzi's method (Morrow et al., 2015).

Such a step is not obligatory but would offer additional opportunities for validation and perhaps serve as a proxy for triangulation.

A third limitation concerns that of generalisability. Generalizability constitutes external validity – one of three gold standards (in addition to internal validity and reliability) for assessing the quality of both quantitative and qualitative research; its epistemological and ontological assumptions are linked to positivism. Thus, its relevance for qualitative research has been often overlooked and perhaps downplayed, limiting its contribution to evidence-based policy and practice. This situation is unsustainable and is increasingly viewed as such (see e.g. Smith, 2018). For this researcher, it raises serious questions as to why one might seek to answer a research question if, by definition, it cannot be answered such that its findings meaningfully contribute to the knowledge corpus and is of relevance to the research community.

Two categories of generalisability, as specified by Hays and McKibben (2021), are of relevance in this study. "Naturalistic generalisability" considers how findings can be transferred from the study context to a similar context. Here, the reader must use their own experience and judgement to assess if the findings can be applied in another context that they wish to study. "Inferential generalizability" places the onus on the researcher to provide sufficient context and thick descriptions such that the reader can determine the extent to which the findings apply in other contexts. For this study, the latter approach was adopted but without overstating the findings' importance.

5.4 Implications and Recommendations for Future Research

Several implications emerge from this study for policy, practice, and further research in TL and ESD. ESD is integral to global sustainability policy due to the UN SDGs. This study illustrates that TL can contribute to ESD within the context of HEIs. For policy, the need for different and innovative approaches should be recognised, but without necessary endorsing just one approach. Instead, an

increased emphasis on critical thinking, reflective practice and critical analysis should be encouraged in education policy. In this way, education policies can remedy and alleviate the sterility of conventional approaches in ESD. Among the insights that emerged from his study were a number that related to practice on the ground. Institutions will not change, at least not rapidly. This onus is on faculty to recognise the current reality and seek to change ESD practice within pre-existing structures. Such an endeavour is eminently doable, as testified by the participants in this study. Implicit in participants' experience are many practical tips regarding the adoption and adaption of TL in curricula and the classroom.

Many implications for future research emerge from this study. Such research efforts must be tempered by an acknowledgement that the use of TL for ESD remains relatively small, even though both TL and ESD arere well-established in their own right. Nonetheless, interest in both is growing. Furthermore, the overall context, that of sustainability as a global challenge, will contribute to the global discourse for the foreseeable future.

In the first instance, a uniform definition of TL is needed. The TL community has acknowledged this need over an extended period. Such a definition might be multi-faceted; different flavours of TL might emerge for use in higher education and lifelong learning, for example. The need for such a definition became apparent during the literature review. Here, several papers were encountered that purported to address TL; in reality, the authors reassessed student- feedback from existing courses and concluded that their students were "transformed" to varying degrees. A more rigorous and scholarly approach is needed, but an agreed model of TL is a prerequisite.

TL is essentially a theory of adult education. Students in HEIs are legally adults; nonetheless, it may be questioned as to whether they have sufficient experience of life to engage with TL meaningfully. Two streams of research immediately emerge from this observation. The first echoes the need articulated earlier for a model of TL unique to HEIs. A second stream involves a longitudinal study for

perhaps the following three years to understand TL's impact on participants' subsequent professional and personal lives.

This study has explored the experiences of TL within the context of ESD. Indeed, decoupling TL for ESD was very difficult as sustainability is integral to participants' individual lives. The methodology adopted for this study could be replicated for other disciplines. Such studies would have their individual particular intrinsic value; furthermore, opportunities for comparison would emerge from which the experiences of those involved in TL could be captured, independent of the discipline.

Numerous opportunities exist for further research in the practical application of TL, both through the experiences of lecturers and students. One of the attractions of TL in ESD is its potential for enabling behaviour change. But is such change achievable or measurable, or even ethical? Is it consistent with the ethos and mission of a HEI? How can TL be reconciled with the constraints of modern HEIs and student expectations? Is TL effective within blended or online learning contexts? Is TL consistent with the current neoliberal model of education? Further validation of TL's efficacy in HEIs is needed if it is to become firmly embedded in the panoply of methodologies for ESD.

ESD itself raises stimulating possibilities for research. Sustainability is a value-laden construct; however, value conflicts can lead to professional and personal crises for lecturers. Such conflicts can drive lecturers away from the profession, or they can be opportunities for intellectual growth or even transformation. Being authentic is intrinsic to lecturers' identity; likewise, it is more likely to foster authenticity in students (Kreber, 2010). But where does authenticity end and issues such as bias or indoctrination begin? In practice, how is a "strategic compromise" (Skelton, 2012) manifested in the ESD?

5.5 Conclusion

This research study sought to capture the shared experiences of lecturers in HEI who adopted TL in ESD. In doing so, I focused on their journey to TL, exploring both the personal and professional

dimensions of this journey. It is must be emphasised that this journey is not complete; it remains ongoing. Moreover, it is one that nobody regretted on embarking; indeed, participants would welcome more fellow travellers. Many obstacles were encountered and circumvented. The most significant obstacle is not institutional barriers of various hues, societal preconceptions concerning the role of the lecturer, or the expectations of students. Rather, it is internal, demanding lecturers reconcile their values and pedagogies in the first instance; only then can lecturers confidently confront the invariable challenges posed by the classroom.

This study confirms that TL is tractable in HEIs. It challenges lecturers to reassess their praxis radically. Moreover, lecturers must reconcile their obligation to facilitate and co-create knowledge with that of the authoritative figure that their position in the classroom endows and that their students cannot but be acutely conscious. The complexity inherent in sustainability can begin to be addressed in the classroom. Traditional models of TL, as articulated by Mezirow, for example, do not translate directly into the classroom. Therefore the lecturer must be prepared to mix-and-match as it were, demanding a detailed understanding of the subject matter and learning context whilst always prioritising the pragmatic over the dogmatic. Such pragmatism was in evidence by focusing on critical analysis and thinking rather than the manifestation of stunning insights and subsequent change in worldview.

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Appendix I: Developments in Sustainability

The Emergence of Sustainability Science

Sustainability and sustainable development have matured both as a concept and environmental paradigm over the last 30 years. As of now, both permeate the discourse at international, government, and societal levels. Moreover, NGOs and commercial entities of various hues compete to proclaim their sustainability credentials. This has led the research community to ask whether this movement represents a novel science. Bettencourt and Kaur (2011) define a “science of sustainability”, demanding collaboration between "perspectives in developed and developing human societies, among theoretical and applied scientific disciplines, and must bridge the gap between theory, practice, and policy" (p. 1). A review of the literature by Kates (2011) demonstrated the multidisciplinary nature of sustainability science, including the natural, social and technological sciences.

To synthesise research in sustainability science, Clark and Harley (2020) adopt a systems perspective for modelling nature-society interactions. Such interactions comprise a global, interconnected, complex and adaptive system characterised by heterogeneity, nonlinearity, and innovation; furthermore, it is noted that the system cannot be predicted but may be guided towards sustainability through a series of dynamic interventions. Six capacities for supporting such interventions are (a) measuring sustainable development, (b) promoting equity, (c) adapting to shocks and surprises, (d) transforming the system into more sustainable development pathways, (e) linking knowledge with action, and (f) devising governance arrangements that allow people to work

together in exercising the other capacities. Intrinsic to this systems perspective is the notion of the Anthropocene (Lewis & Maslin, 2015), an "unofficial" unit of geological time describing this current epoch where human activity is perceived as having a significant impact on the earth. In seeking to remedy the unsustainability of current practice, a radical political restructuring has been called for by some. For example, Sen (2013) calls for informed agitation, acknowledging that sustainable development has an inherent political dimension. Here, synergies with action research and critical theory may be suspected. In contrast, Fagerberg (2018) argues that transformative innovation policy offers a credible approach for sustainability transitions.

Evolutions of Sustainable Development

The three pillar model of sustainability and sustainable development was well-established by the start of the 21st century. This model remains central to the ongoing discourse on sustainability. Nonetheless, some in the research community feel it is inadequate. Valentin and Spangenberg (2000) consider the “Prism of Sustainability”, constituting four dimensions - social, economic, environmental, and institutional (the fourth dimension). From a discipline perspective, this model is informed by political science. It must be emphasised that while the current discussion focuses on the dimensions of sustainability, at present, it is the inter-linkages between the dimensions that occupy the attention of the research community. Other researchers suggest that there are actually five pillars of sustainability – economic, environmental, social, political and territorial (Sachs, 2004, as cited in (Zen et al., 2012). The debate is ongoing; however, it should be noted that the conventional three pillar model is still ubiquitous. However, there is a question over what degree the three pillar model meaningfully translates to sustainability activities on the ground, for example, in urban contexts.

Innovation-centric approaches offer an alternative and even radical approach to sustainable development and sustainability. Silvestre and Ţîrcă (2019) propose a typology on innovation comprising four distinct types of innovation:

1. Traditional - both environmental and social challenges are a low priority.

2. Green - priorities the environmental dimension but insufficient emphasis on the social challenge.
3. Social - prioritises social challenges but places a lower emphasis on the economic and environmental challenges.
4. Sustainable - prioritises both the environmental and social challenges.

Of the four categories, the fourth type, sustainable innovation, of the most exciting and challenging. It does not seek to focus on one pillar exclusively; instead, it seeks to treat all three pillars equally. It is risky, complex and ambiguous and seeks to reconcile different demands and conflicting objectives. By prioritising the balance between the three pillars, sustainable innovation aligns with the triple bottom line of sustainability (Elkington, 1997). However, there is often an inherent contradiction in seeking such balance; when one pillar is deemed sustainable, the very process involved in delivering such sustainability may result in another pilar becoming unsustainable (Klarin, 2018).

A more recent interpretation of the sustainability paradigm is manifested in Sustainable Innovation 2.0 (Dyck & Silvestre, 2018). This model advocates the adoption of innovation by organisations, but the motivation should prioritise social and ecological dimensions. In contrast, the economic dimension is not emphasised; however, it is not unimportant. The need for financial viability is central, but the objective of maximising financial returns is not prioritised. Such an approach may be considered as a double-bottom line - the economic dimension is subservient to the social and ecological impact. It should be noted that the triple bottom line, articulated in the 1990s, has outlived its usefulness. A radical vision, when first articulated, it has now "*been reduced to a mere accounting tool, a way of balancing tradeoffs instead of actually doing things differently*" (Elkington, 2018).

In summary: sustainability and sustainable development are universal concepts; nonetheless, their theoretical underpinnings and formal definitions remain open to debate. Furthermore, the terms are political and value-laden. For educators, several problems accrue from this state of affairs. Curricula

cannot be credibly constructed around inherently fluid concepts. Furthermore, as there is an axiological dimension, ethical issues invariably arise for the teaching profession. Clark et al. (2016) advocate social learning to bridge the theory of sustainability with its practice, that is, translating knowledge into action. Such an approach is justifiable when considered in the context of lifelong learning. However, for those operating in higher education establishments, reconciling the institution's ethos, the needs of students, and their own assessment of what constitutes ethical practice remains a key challenge going forward.

International Initiatives in Sustainability

Research in sustainability continues at pace as the complexity and global scale of many societal problems crystallise. Sustainability research is an interdisciplinary, multidisciplinary and transdisciplinary endeavour seeking to identify strategies and solutions that contribute to the social good. However, now that sustainably is recognised as a discipline in its own right, and its potential for impact at the business, community and social levels recognised, education and training issues come to the fore. Thus, a need for trained specialists, especially in higher education, has been recognised. Furthermore, there is an inherent need to develop appropriate networking and coordination instruments amongst institutions (Leal Filho et al., 2018). The European School of Sustainability Science and Research[4], an inter-university consortium, is one initiative that seeks to foster a common approach to teaching and research in sustainability topics.

At a global level, the sustainability discourse is dominated by the UN Sustainable Development Goals (SDGs) for 2030. SDG 4 focuses on "Quality Education"; this goal contains ten specific targets and seeks to address the needs of all actors in society from children to adults. In the case of sustainability, Target 4.7 states:

> By 2030, ensure that all learners acquire the knowledge and skills needed to promote

[4] European School of Sustainability Science and Research - https://esssr.eu/,

> sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

It must be reiterated that SDG goals are not insular; there are interrelated. For example, education sustainability has a clear contribution to Goal 12 - Ensure sustainable consumption and production patterns. However, SDG 4 must be considered within the context of global education policy. In the view of some, such policies are dominated by benchmarks (see e.g. Ozga, 2012). Other researchers advocate a more inclusive and holistic approach based on the notion of structure and agency (Boeren, 2019).

In Europe, the EU's Green Deal (European Commission, 2019) may be seen as a policy and strategy to build sustainable societies across Europe. Fundamental to the Green Deal is competitiveness and innovation with a prevailing context of resource efficiency and sustainability. Green digital technologies are seen as key enablers of the Green Deal. However, one criticism of the green growth model is “its endorsement and reinforcement of the middle-class lifestyle and of the traditional vision of industrial society, including its large-scale technologisation, mechanisation and automatisation” (Ossewaarde & Ossewaarde-Lowtoo, 2020, p. 11). Core to the Green Deal is the notion of transformational change, a theme that also recurs when discussing education within the context of the SDGs. Higher education establishments, training institutions and schools are seen as crucial enablers of the transition to sustainability. It is also intended to develop a European Competence Framework to develop and assess competencies necessary to engage with climate change and sustainable development. In a somewhat contrarian view of sustainable development, Boström et al. (2018) argue that sustainable development is "the product of learning, but also a learning process, that is, a way of thinking and acting that is open to learning and changing" (p. 3). At

the time of writing, one of the main concepts of interest in this discussion is the concept of "Education for Sustainable Development".

Appendix II: A Note on Transformative Learning in Online Contexts

At the time of writing, many institutions concerned with education have considered online and blended approaches to mitigate the effects of public health measures. It may be reasonably conjectured that such approaches will form a significant proportion of course offerings going forward; TL practitioners are not immune to online developments. Terras (2017) speculates that moving courses from face-to-face to online delivery constitutes a disorienting dilemma for faculty and explores this question within the context of TL using a qualitative-constructivist approach. Two frames of reference were found to change - the realisation that quality teaching could occur online and that increased organisation and attention to detail were required. However, participants' pedagogical perspectives did not change.

Staff for whom anything online is new, and who may not have the technology proficiency necessary for elearning, may update their skills through professional development. Esterhuizen et al. (2013) undertook one study (n=21) that explored faculty experience as they developed their skills with the support of an elearning manager. The study is pragmatic/mixed methods, presenting a transition process of migrating from instructivist towards constructivist approaches. It may be hypothesised that TL practitioners follow a parallel journey in many instances.

Appendix III: Introductory Email sent to Participants

Transformative Learning Study

Dear [redacted]

My colleague in the Copernicus Alliance, Ingrid, recommended you as somebody with experience in transformative learning and who may be willing to contribute to a study that I am undertaking. My name is Michael O'Grady; I am currently undertaking a part-time postgraduate qualification in education at the National College of Ireland. I work full time in ICT research [redacted]

My study involves an interpretive/phenomenological study of those who have some experience of transformative learning and sustainability topics. The objective is to explore participant's journey to transformative learning, discuss experiences with institutions, colleagues, and students, and discuss sustainability implications. The methodology focuses on a semi-structured interview (50 minutes), after which a transcription will be prepared for thematic analysis.

I have attached an information sheet and consent form (pdf/docx); this explains the process in further detail – it is relatively standard. If you have any questions, please direct them to me. If you are interested in participating, the consent form must be signed and returned to me.

Thanks for taking the time to consider this request.

Kind regards

Appendix IV: Information Sheet &

Consent Form

Study Title: Transformative Learning: Issues and Perspectives

Student: Michael O'Grady

Email: [redacted]

I wish to invite you to take part in a research study. Before deciding, you need to understand why the research is being planned and what it would involve for you as a participant. Please take some time to read the following information carefully. Ask questions if anything you read is not clear or if you would like more information. Take time to decide whether or not to take part. Thank you for taking time to read this information leaflet.

Purpose of the Study. As part of the requirements for the MA degree at the National College of Ireland (https://www.ncirl.ie/), I need to carry out a research study. This study seeks to explore the journey of lecturers who harness Transformative Learning when lecturing on sustainability-related topics. It is planned to interview several practitioners. From these interviews, shared experiences and commonalities will be identified. From these, best practice and future challenges will emerge.

What will the study involve? The study will involve partaking in an interview for 50 minutes maximum. During this interview, you will be asked to reflect on your experiences of Transformative Learning. A schedule of questions will be provided prior to the interview. The interview will be audio recorded, and a transcript subsequently generated. This transcription will be provided to you for

verification. Only after you sign-off on its correctness will it be analysed. On signing and returning the attached consent form, a suitable time will be agreed with you. All interviews take place over Zoom or equivalent.

Why have I been invited to take part? You have been approached to participate in this research as you are an experienced practitioner of Transformative Learning.

Do you have to take part? No. Participation is voluntary. Only after signing the attached consent form will you be invited to fully participate. After agreeing to participate, you can still withdraw from the study at any time up to two weeks after signing off on the interview transcript. It is helpful to take this time to reflect on the interview and request to withdraw if uncomfortable after reflection. On requesting to withdraw, any and all collected data will be destroyed.

Will your participation in the study be kept confidential? Yes. I will ensure that no clues to your identity appear in any publications, including the thesis, that emerge from this study. Any extracts, if any, that are quoted will be entirely anonymous.

What will happen to the information which you give? The data will be kept confidential for the study's duration; it will be available only to myself and my research supervisor (Dr. Conor Mellon). It will be securely stored on servers at the National College of Ireland. Processing of data will take place on an encrypted laptop. Upon completing the project, data will be retained for a maximum of a further two years and then destroyed.

What will happen to the results? The results will be presented in a thesis. They will be seen by my supervisor, a second marker, and an external examiner. The thesis may be read by future students on the course. The study may be published as a research article in an international research journal.

What are the possible disadvantages of taking part? I don't envisage any negative consequences for you in taking part. It will consume an hour of your valuable time for the interview, and some

additional time for cross-checking the interview transcript. Invariably, you will reflect on the study before and after the interview without being especially conscious of it.

What if there is a problem? I will cease recording the interview on request. At the end of the interview, I will discuss with you how you found the experience and how you are feeling.

Who has reviewed this study? Approval is given by Research Ethics Committee of the National College of Ireland.

Any further queries? If you need any further information, you may contact me: Michael O'Grady - x20119518@student.ncirl.ie.

If you agree to take part in the study, please sign the consent form overleaf.

[Over…

Consent Form

I …… agree to participate in Michael O'Grady's research study.

The purpose and nature of the study has been explained to me in writing.

I am participating voluntarily.

I give permission for my interview with Michael O'Grady to be audio-recorded.

I understand that I can withdraw from the study, without repercussions, at any time, whether before it starts or while I am participating.

I understand that I can withdraw permission to use the data within two weeks of the interview, in which case the material will be deleted.

I understand that anonymity will be ensured in the write-up by anonymising my identity.

I understand that anonymised extracts from my interview may be quoted in the thesis and any subsequent publications.

Signed: ……. Date: ……

PRINT NAME: ……..

Appendix V: Interview Protocol

(Researcher)

Interview Protocol

This interview will follow a semi-structured format. The objective is to provide the participant with a platform to expand on their experiences of transformative learning in practice. The questions may be best understood as guidelines or cues. In this way, an effective balance between constraining the interviewee to the topic of interest, reducing bias on the interviewer's part, and giving the interviewee maximum flexibility to focus on the issues they deem of most importance. A guiding question is provided so that the interviewee has a broad understanding of the study being undertaken. Three broad questions will then be asked to elucidate context. As the interviewees answer these, they may be prompted to expand on specific topics as they see fit.

Guiding Question

What is your experience of transformative learning?

Introduction

Thanks for agreeing to participate in this study. I do appreciate the time and effort that you have made. Just to confirm that I have received your consent form.

Do you have any additional questions about this?

The interview will broadly follow the outline that I sent you yesterday. I will ask for clarification at various points and maybe ask some follow-up questions. If you do not wish to answer any of these,

please say so, and we will just move on. I may make some notes and reminders for myself as you speak.

If you are happy to begin, I will activate the record button - you should now see an icon on your screen indicating that the session is being recorded?

Some preliminary information

- Can you confirm your profession, please?
- How long have you been in your profession?

Formal Interview

Q1: What is your understanding of the term 'transformative learning'?

Possible prompts:

- How do they interpret this term?
- How long have you been utilising transformative learning in your practice?
- In what subjects have you experience of utilising transformative learning?

Q2: How did you become interested in Transformative Learning?

Possible prompts:

- When and where did you first encounter TL? What were your impressions?
- Did any of your own lecturers/teachers utilise TL? What were your impressions?
- What other pedagogical methods have you applied? Do you use the same approach in all your teaching?
- What triggered your decision to adopt TL in practice?
    - What reservations did you have?
- What do you remember about your first TL session?
- How has your practice changed since your first TL session?

- To what degree would you view your adoption of TL as a personal transformative process?
- Have you undertaken professional learning and research in TL?

Q3: Tell me about your use of Transformative Learning in your teaching?

(For example, in planning for programmes-modules? and planning classes? how do you implement this in practice?)

Possible prompts:

- How do you go about planning a transformative experience for your students?
- What strategies and resources do you use? Which of these is especially effective and why?

Q4: When adopting TL, what has been the reaction of your students? Colleagues? Institution?

Possible prompts:

- What has been the biggest obstacle you had to overcome?
- Can you highlight any experiences that have especially vindicated your adoption of TL?
- Do you think students are prepared for a potentially transformative learning experience?
- Can you describe an occasion when you discerned one of your students undergoing a transformative experience? How did you react?

Q5: Why do you think TL is an appropriate approach when teaching topics relating to sustainability?

Possible prompts:

- Do you see any ethical issues in challenging students' worldviews?
- Do you ever doubt your approach?

Q6: What particular challenges do you see for TL practitioners?

Possible prompts:

- Do you think TL can be utilised in online or blended contexts?
- How should aspiring practitioners approach TL?
- Can you comment on your experiences of TL outside of traditional classroom situations?

Q7: What particular benefits do you see for TL practitioners?

Possible prompts:

- Do you see career development opportunities, for example?
- Do you think students will give better feedback for your courses?

Q8: So looking at Transformative Learning in the future: how do you envisage Transformative Learning developing in your practice or more generally within your school-department?

- **(For example, is it being adopted more broadly across the school-department? at a disciplinary-transdisciplinary?)**

Possible prompts:

- What strategies could be adopted to promote the adoption of TL?
- Do you foresee any particular resource issues going forward?
- Is there a need for recognised professional learning or qualifications in TL?
- Do you see potential collaboration or teaching opportunities going forward?
- Would you advise new staff to adopt TL as a pedagogy?

Q9: Have you used Transformative Learning only in face to face teaching or have you used it when teaching online?

(If teaching online: Can you say a little more about your experience of using Transformative Learning for online teaching and how it has worked and identify any issues that have arisen when using this approach)

Final question

Do you have any additional comments you would like to add or clarifications you would like to make?

Conclusion

This brings the formal interview to a close. I will now switch of the recording and answer any questions you may have concerning the study.

Appendix VI: Interview Questions

(Participants)

Interview Questions

Q1: What is your understanding of the term 'Transformative Learning'?

Q2: How did you become interested in Transformative Learning?

Q3: Tell me about your use of Transformative Learning in your teaching?

(For example, in planning for programmes-modules? and planning classes? how do you implement this in practice?)

Q4: When adopting Transformative Learning, what has been the reaction of your students? Colleagues? Institution?

Q5: Why do you think Transformative Learning is an appropriate approach when teaching topics relating to sustainability?

Q6: What particular challenges do you see for Transformative Learning practitioners?

Q7: What particular benefits do you see for Transformative Learning practitioners?

Q8: So looking at Transformative Learning in the future: how do you envisage Transformative Learning developing in your practice or more generally within your school-department?

(For example, is it being adopted more broadly across the school-department? at a disciplinary-transdisciplinary?)

Q9: Have you used Transformative Learning only in face to face teaching or have you used it when teaching online?

(If teaching online: Can you say a little more about your experience of using Transformative Learning for online teaching and how it has worked and identify any issues that have arisen when using this approach)