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# **Transformative Learning for a Sustainable Future: An Exploration of Pedagogies for Change at an Alternative College**

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**Abstract:** Educators and policy makers have long recognised the central role that education can play in creating a more sustainable and equitable world. Yet some question whether current processes across mainstream higher education prepare learners sufficiently to graduate with the capabilities or motivation to shape and create a future that is life-sustaining. This paper presents findings from a qualitative research project carried out by Plymouth University in association with Schumacher College, Devon, UK. Schumacher College is an alternative, civil society college, owned by the Dartington Hall Trust that claims to provide transformative learning opportunities within a broad context of sustainability. The study explored the nature and application of transformative learning as a pedagogical approach to advance change towards sustainability. If learners claimed transformational learning experiences, the research asked whether, and to what extent, this transformation could be attributed to the pedagogies employed at the College. The paper begins by setting out the broad background to the relationship between marginal and mainstream educational settings, and definitions and theoretical underpinnings of transformative learning, and then leads into the research design and findings. The potential for transformative pedagogies to be applied to and employed within the wider higher education (HE) sector is then discussed, and the overall findings and conclusions are presented.

**Keywords:** transformative learning (TL); education for sustainability; learning for change; space for emergence

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## 1. Introduction and Background

What a sustainable society might look like and how it might be realized is the subject of much current debate across society, including within the higher education (HE) sector. The role of HE in shaping the leaders of tomorrow and nurturing graduates equipped to act in future scenarios is arguably one of the central issues facing the sector. At the same time, there is evidence of growing student interest in these issues. Two recent studies commissioned by the UK's Higher Education Academy (HEA) on student attitudes towards, and skills for, sustainable development consistently showed that over two thirds of first and second-year respondents (66.6% and 70.3%, respectively, in 2011, and 70% in 2010) believe that sustainability is an issue that should be addressed by their university. In addition, there is a continued preference among students for a pervasive reframing of curriculum content rather than additional content or courses [1]. Meanwhile, questions pertaining to the type of learning and competences that may be required are emerging from the literature and in public sustainability debates, as reflected by Steuer and Marks ([2], p.12):

The problems we now face at both a local and global scale puts higher education firmly in the driving seat to equip its learners with the knowledge, skills and understanding to pioneer innovative and creative responses to achieving wider economic, social and environmental well-being.

The place and role of sustainability in higher education has been a matter of policy concern for some years, reflected by key bodies nationally including the Higher Education Funding Council for England (HEFCE) [3] and the Higher Education Academy as well as internationally, (Rio+20 Declaration) [4], with recent calls for much greater alignment of HE towards the issues and opportunities that sustainable development presents [5–7]. Yet there is an inherent tension between market-oriented neoliberal approaches to higher education where student capacity to be productive in a market economy is emphasised, and more holistic conceptions of the role of universities in the light of a context of socio-economic and ecological challenge, complexity and uncertainty. Both economic and broader well-being agendas are existent in mainstream HE, though not in equal measure. The way that the sector navigates a course through dramatic restructuring, and at times vying priorities, will have significant impact on the nature of higher education in the future.

The central inquiry addressed throughout this paper is the type of learning that is consistent with and helps manifest individual, organizational and social change towards more sustainable practices. The opportunity afforded by the long established relationship between Plymouth and Schumacher College, a small but world renowned educational institution, allowed this research to emerge from discussion over a period. The university is interested in innovative approaches to pedagogy particularly in relation to sustainability through its pedagogical research institute PedRIO, whilst the college has for some time been interested in research on the transformative learning experiences that many participants report in their course evaluation. It is important to state that when the research took place, the College had no explicit learning and teaching strategy, although at the time of writing an initiative

was in hand to review and sustain the quality of teaching and learning and academic standards. Meanwhile, the authors of this paper have both interest and track record in learning for change research, and in particular, what aspects of transformative learning process are transferable and workable in a conventional institution of higher education.

The overall aim of the research was to investigate the learning and teaching methods employed at Schumacher College in order to gauge their nature and effectiveness, derive insights on the design of the learning experience, and generate initial findings on the degree to which innovative pedagogical experiences and settings can be utilised in new degree courses and employed in the wider HE sector.

The key research questions were:

- (1) What are the pedagogical characteristics of the learning experience at Schumacher College?
- (2) In what ways and to what extent do they contribute to a learning experience that may be said to be transformational?
- (3) What elements of pedagogy employed at Schumacher College are potentially transferrable to other learning situations, particularly the higher education mainstream?

The contextual challenges of sustainability have led to rising interest in transformative learning (TL) as a pedagogic approach that promises the depth of learning appropriate to scale of the change that many argue is necessary [8–10]. Yet, whilst change in mainstream universities is slow, smaller and more agile institutions appear to offer more fertile ground for innovation in this regard. In the past in the UK, much innovation began on the margins before influencing the mainstream.

Alongside the mainstream is an educational movement that can be loosely titled “alternative, ecological colleges”. Several exist around the world: Centre for Alternative Technology, Schumacher College, Centre for Human Ecology, Emerson College and Hawkwood College in the UK; Bija Vidyapeeth in India; and the Centre for Ecoliteracy, Esalen Institute and Whidbey Institute in North America. They are of interest to debates centering on the nature and possibility of “the sustainable university” [6], and on the future of higher education because they are small, independent and therefore able to innovate and experiment. Whilst each is unique, they share an explicit aim and ethos: to provide learning that transforms (individuals, businesses, communities) with a view to creating a more sustainable society. This explicit aim chimes with the commonly accepted aims of Education for Sustainable Development (ESD), as for example, defined by UNESCO (2005) [11], which endorses “moving beyond awareness to incorporate real change and transformation through empowerment and capacity-building that may lead to or allow for more sustainable lifestyles, values, communities and businesses” Wals/UNESCO ([12], p. 10). Resonant with this ethos, Schumacher College has as its strapline, “Transformative Learning for Sustainable Living” and describes itself thus:

Schumacher College has an enviable reputation for cutting-edge learning. Our work is to inspire, challenge and question ourselves as co-inhabitants of the world, to ask the questions we all struggle to find answers to and to find sound knowledge, intuition and wonder in our search for solutions [13].

This is no small endeavour. Yet the College attracts people already interested in these explorations and therefore, in relation to transformative learning, there is a certain state of readiness and openness in participants which makes such experiences more likely. Schumacher College (SC) is currently interested in reviewing its pedagogic methods and approaches to assess the extent to which the

College's reputation and claim for transformational learning experiences—which can lead to significant personal change—is attributable to the kinds of pedagogies employed.

The collaboration between SC and Plymouth University, undertaken over the period from 2011–2012, aimed to find clarity on the pedagogical approaches used at SC, and derive insights on the design of the learning experience. Furthermore, it aimed to generate findings on the potential for innovative pedagogical experiences and settings to be employed in existing and new degree courses and across the wider sector. Such research is inherently interesting to those working within the mainstream and pursuing the ESD agenda, as innovations might “travel” and be applicable in more conventional settings. Further, as the ESD agenda rises in importance, learning from specialist providers will arguably be of increasing interest to the HE sector.

The rest of the paper looks, in turn, at research design: the nature of transformative learning; the nature of learning at Schumacher College (based on four themes that arose from the research: community, pedagogies, co-creation, and emergence); a comparison of mainstream and marginal institutional settings; transferability to the mainstream; and conclusion.

### *1.1. Research Design*

Processes of transformational learning are often elusive, contingent and subjective. Factors depend on many variables and as a result, capturing and understanding personal or group changes in ways that can be explicated further can prove challenging. A qualitative approach to the research objectives of gaining insights about people's learning experiences was adopted, based upon an explicitly interpretive research paradigm [14], recognizing that the research was essentially about understanding participants' subjective experiences in a particular context (that of the College).

In order to capture personal and valutive transformation, a qualitative exercise was designed involving a mixed methods approach [15]: semi-structured interview (SSI), survey and focus group—a complementary purposes model allowing us to use different methods for different tasks in order to enhance interpretability of the data as a whole. Further, they helped facilitate sufficient interaction between the researchers and participants to allow meaning to emerge; at the same time, the researchers were also aware of the influence of their own conceptions and values and of how these might bear on interpretation. The nature and operation of the research was agreed with Schumacher College; ethical approval was obtained from the university's Faculty of Education Research Ethics Committee, on the basis of the research “involving new data collection from/about human participants”; information sheets were provided in paper or electronic form for all prospective participants, and consent forms provided to all those who did so.

During the SSIs, more personal and individual narratives could be explored in-depth, whereas the surveys enabled us to capture specific data that lent itself to comparative analysis. In order to recruit a diverse range of research participants, we cast the net as wide as possible and contacted the database of contacts from SC as well as spoke to various short course participants about the research in person. Visiting and resident tutors were contacted via the College in a similar fashion. The data set consisted of:

- (1) 22 semi-structured interviews with SC past participants, core staff, volunteers and visiting short course tutors;
- (2) 35 past short course participant surveys;

(3) 1 focus group.

Before discussing the research project in depth it is necessary to sketch the conceptual landscape of transformative learning.

### 1.2. *The Nature of Transformative Learning*

Orr ([10]) argues that there is no correlation between high levels of education *per se* and sustainability-conscious behaviour, as highly educated people have created or contributed to the challenges that threaten our survival. Sterling [16] asserts that it is out of the milieu of such paradoxes and arguments that educators interested in sustainability have looked into learning theory for ways forward. He argues that in the context of contemporary conditions of unsustainability, complexity and uncertainty, the concept of transformative or transformational learning has aroused significant interest. For example, Raskin ([17], p. 469) maintains:

The shape of the global future rests with the reflexivity of human consciousness—the capacity to think critically about why we think what we do—and then to think and act differently.

Leading transformational learning theorist Mezirow ([18], p. 20) argues that the essence of such reflexivity involves learning how to:

....negotiate and act on our own purposes, values, feelings, and meanings rather than those we have uncritically assimilated from others—to gain greater control over our lives as socially responsible, clear thinking decision makers...we transform frames of reference—our own and those of others—by becoming critically reflective of their assumptions and aware of their context.... We become critically reflective of those beliefs that become problematic.

Sterling asserts that TL refers to learning that touches our deeper levels of knowing and meaning, which then influences our more immediate and concrete levels of knowing, perception and action. He draws on Gregory Bateson's [19] model of learning levels as offering insights into the possibilities of the kind of "higher order" learning experiences and change of consciousness that he believes the crisis of sustainability calls for. Bateson distinguishes three orders of learning and change corresponding with increases in learning capacity, and these have been adopted variously by learning and change theorists. First order learning and change refers to doing "more of the same", or change within boundaries without examining the values that inform action. Second order learning refers to significant change in thinking based on an examination of assumptions and values. The distinction between the two levels of learning and change is significant, Sterling maintains, because:

It is possible to see that most of the learning promoted in formal education in schools and higher education is of the first order variety, being content-led and externally focused, and often delivered through transmissive pedagogies within a consensually accepted framework of values and purposes. It is concerned fundamentally with "information transfer"—learning about things—and does not normally challenge the assumptions or beliefs of the learner. This is maintenance learning—adjustments or adaptations are made to keep things stable in the face of change Sterling ([16], p. 22).

Sterling argues that some theorists use the term TL to describe experiences that might be described as second order learning. For example, Cranton [20] suggests that:

Exposure to alternatives encourages students to critically question their assumptions, beliefs, and values, and when this leads to a shift in the way they see themselves or things in the world, they have engaged in transformative learning.

However, Bateson's model distinguishes a third learning level, which may be said to be epistemic learning: learning that involves a profound shift in the operative way of knowing and thinking that frames people's perception of, and interaction with, the world. This is the experience of "seeing our worldview rather than seeing with our worldview" ([16], p. 23). Many commentators view third order learning as involving perceptual change and coming to a transpersonal ethical and participative sensibility, or a shift towards a more relational way of seeing that inspires different values and practices.

In sum, TL can be said to involve at least a shift of perception from first order to second order learning, and some writers use the term in this more limited sense. For others, transformative learning necessarily equates to epistemic learning (*i.e.*, third order learning), or a change in worldview [21–22]. This can often involve resistance on the part of the learner because it challenges existing beliefs and ideas. For this reason, TL is often difficult to design or facilitate as a learning experience, and may be uncomfortable for the learner.

Below (Table 1) is a table of learning levels adapted from Bateson's model which summarises the shift towards deeper learning:

**Table 1.** Levels of learning.

| <b>Orders of change/learning</b>         | <b>Seeks/leads to</b>                 | <b>Can be labelled as</b>                     |
|------------------------------------------|---------------------------------------|-----------------------------------------------|
| First order change<br>Cognition          | Effectiveness/Efficiency              | "Doing things better"<br>Conformative         |
| Second order change<br>Meta-cognition    | Examining and changing<br>assumptions | "Doing better things"<br>Reformative          |
| Third order change<br>Epistemic learning | Paradigm change                       | "Seeing things differently"<br>Transformative |

Table 1 adapted from Sterling ([16], p. 25).

Radical pedagogue Paulo Freire ([23], p. 22) states that it is the interaction of reflection and social action which allows people to become aware of, understand, and act on their collective reality, and that neither one nor the other has sufficient transformative power by itself. At least sometimes, action and reflection occur simultaneously. Related to the idea that TL is dependent on several intertwining processes, Ball ([24], pp. 259–266) explored the transformative learning experiences of 14 adult learners in relation to their development of a sustainability ethic, or ethic of responsibility towards the planet. During the analysis stage Ball identified different "phases" or "themes" in the transformative learning experiences of the fourteen learners interviewed. The phases are not, he asserts, necessarily sequential or discrete and there was some overlap. These are set out as "Leaving the Familiar and Entering a State of Disequilibrium", "Responses to the Disequilibrium: Making Meaning", Building Commitment and Personal Responsibility, Integrating through Acting Anew, and "Renewal".

Based upon his research, Ball reports three significant learnings that inform understanding of TL, and may help educators to develop TL learning experiences. Firstly, that transformative change is not like an acquired skill, but rather, it is a “fundamental “sea-change” that encompasses the whole person” ([24], p. 268). Secondly, that educators in the role of change agents can:

...deliberately and wilfully...probe into the complex connection across the gaps that stir our conscience—the gaps between rich and poor, human and non-humans, north and south, justice and injustice, peace and war and present and future generations.

Thirdly, support is required for learners to engage in this activity:

Those who enter into this realm by themselves are headed for discouragement and are less likely to sustain their commitment.

Ball recommends a “kindred network of peers and a trusted and capable mentor” ([24], p. 269), not least as transformative experiences can be uncomfortable and problematic for learners who find their deep assumptions and ideas challenged.

The following section describes the research and findings on the nature of the learning experiences at SC.

## 2. The Nature of Learning at Schumacher College

It is important to note that the College has, as its strapline, “Transformative Learning for Sustainable Living”. So it was reasonable to expect that participants might have some view of what this could mean. Amongst our participants, at least, this proved to be the case. In our research, when asked what they understood by the term “transformative learning”, many of the participants understood TL in terms which suggested third-order learning, that is, “seeing things differently” as the below quotes demonstrate:

Transforming our being in the world, the way that we are, the choices that we make, the behaviours that we put into action...about narrowing the gap between our espoused theory...and our theory in use—how we actually act.

SSI

Learning experiences that challenge you to deeply reflect on attitudes, values and behaviours leading to significant changes (ideally to the degree of changing perceptual paradigms).

Survey

Reconnecting to our selves, hearts so that we can build a whole new way of seeing and understanding our connections and relations to others, to the world.

Survey

Self-knowledge and change of action. Deeply probing my values—the discontinuities between my values, my knowledge, and my actions and choosing to make change to align the three.

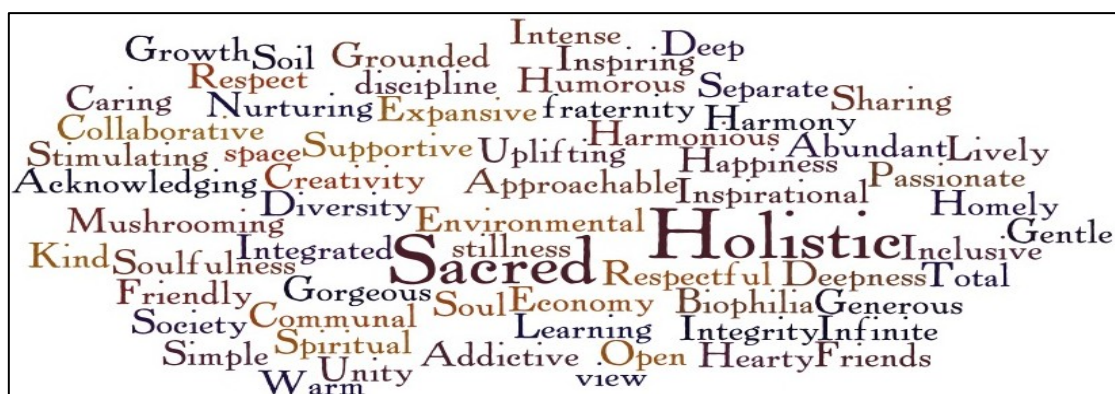
Survey

A way of “seeing” in particular the building of bridges across different worlds; conventional science and a science of qualities; indigenous and mainstream world views; the human and non-human experience. It is also about relationships; that we have with each other, that we have with the planet, that we have with all that we share the planet with.

### Survey

By way of an introductory exercise, when asked to describe the atmosphere at the College, participants provided the following adjectival descriptors (Figure 1). Whilst there was little overlap between keywords employed which might suggest diverse views, nevertheless, the words suggest a kind of gestalt that reflects the qualities of the College atmosphere as perceived by the participants.

**Figure 1.** Descriptor terms used by participants.



Whilst the College is a special case, it would be interesting to compare Figure 1 with the terms that might be suggested by students in a conventional HE setting. At Schumacher, as the College is residential, learning experiences are inseparable from the immersive, lived experience described here. Since its inception in 1992, the characteristics of the College as a unique place have been key to the experience of course participants. It has a small campus, with one large building in which most of the communal cooking, eating, learning, meeting and meditation, take place and in which some office space is housed. This house—the Old Postern—is historic and has a special atmosphere because of its age and layout. Satellite buildings close by provide dormitory accommodation and further learning and office spaces. The College sits within a large 1200 acres estate—Dartington Hall—and is surrounded by gardens and woodland that provide outdoor learning opportunities.

The day-to-day schedule of the College is specific and pre-arranged: whole college meetings, scheduled learning sessions, meal preparation and eating, coffee breaks, domestic tasks and social events happen at set times each day. At present, the College has no explicit teaching and learning strategy or action plan or key principles around pedagogy that visiting tutors are required to work to. In the case of short courses (running between three days to three weeks, mostly one week), the nature of the teaching and learning that takes place within the scheduled sessions is not prescribed or pre-discussed. Rather, where courses are not taught by college faculty staff, they are designed and facilitated entirely by visiting tutors and facilitators. Core modules of the masters and diploma courses are taught by core SC staff and optional modules involve participation on short courses.

We thematised the characteristics of the learning experience at SC that emerged from the data set into four areas. Each theme is elaborated below in relation to transformative learning:

- (1) Living as a community/group dynamics;
- (2) Diverse range of pedagogies;
- (3) Learning as co-creation;
- (4) Space for emergence/epiphanic moments.

### 2.1. Living as a Community and Group Dynamics

SC uses the word “community” throughout its literature and on its website, mostly with reference to its being “embedded within the Dartington, Totnes and Devon communities”. In pre-course literature, learners are introduced to the nature of communal living and the importance the College places on sustaining and developing its internal, college community. Communal living has a profound bearing on the transformative potential of participants’ experiences of the College. Living in a community, in simple surroundings, working collaboratively, being absorbed in nature and retreating to a safe environment in which to experience “Transformative Learning for Sustainable Living” comprise key aspects of living at SC, and these principles are woven into the way the College works and operates including sharing “duties” such as food preparation and cleaning. Living as a community—even a temporary one, as manifested in short courses at the College—has the ability to “hold” individuals and groups of people in a safe environment. With reference to eco-villages, Christian ([25], p. 9) explains:

People appear to experience personal growth and at times profound transformation from living in community, even in communities which are not focused on personal growth *per se*.

The majority of participants spoke lovingly and passionately about sharing all aspects of the living experience from gardening to clearing away dishes, to chatting in the common areas and sharing ideas:

The fact that we all get involved in the kitchen, in the garden, in helping, just in a small way and for a small time, makes us feel part of the community. So there’s a community aspect to this learning environment that you so seldom find elsewhere.

SSI

Living community—I think when you live in the same building and you eat at the same table as the people that you’re working with, you get to know them better, you get to know a little bit more about them so you build a rapport with them and, with that relationship of the group, you feel more at ease talking to them. And so the communication is deeper and more meaningful.

SSI

I am absolutely sure that the work groups are a fundamental and unique experience for participants and feel also that the vital importance of cooking and eating together should be acknowledged and retained.

SSI

Some participants drew comparisons with their experiences of boarding school; living in small communities, “towing the line”, and learning together:

It a little bit reminds me of when I was at boarding school in a way, because it’s quite a tight run community and if something’s out of line you almost feel, okay you’ve got to tow the line and everyone’s got to share that, but it’s almost like, almost run on military precision, which you’ve got to have to a certain extent to make community work, but you’ve got to have room for allowance for mistake or for forgetting and it not being an awkward situation, not people getting precious about it.

SSI

The college community is comprised of different groups of people: academic staff, professional services staff, visitors, volunteers, masters students, short course participants, visiting tutors and facilitators. Continuity exists within the College, mainly through the permanent—and often long-serving—staff.

The immersive experience at SC involves participation within and across different groups throughout the average day.

The size of the group is determined to be important to the nature of the learning experience as it can impact group dynamics, community, engagement and cohesion. TL is affected by group dynamics and group size is an important part of this, as Forsyth ([26], p. 124) describes:

As a group increases in size the number of possible relations among individuals increases so rapidly that members can no longer maintain strong, positive ties with all group members.

Furthermore, the size of the group and its group dynamics can enhance or hinder opportunities for learning and change. Kasl and Elias ([27], p. 229) suggest that there is a “group mind” and that transformation can be collective; based on the sharing of worldviews, points of view and frames of reference. This assertion was reflected in the views of the research participants:

Transformative learning at its extreme has to be worldview, group-collectively undertaken... that’s the one that we most need in the world at the moment.

Survey

There’s a group entity transformation too...Sometimes on short courses there is some of that identity transformation going on.

SSI

Some groups become a whole and they lift their level of functioning up, they transform. They become a collective identity and they just function at a much higher level and they do that not by losing their individual identity but by stepping more firmly into it, so it’s a dual transformation.

SSI

It all depends on the group and you and the dynamic, the teachers and the group and the dynamic between them. And the dynamic, obviously, if it’s connected to the world, then you’re also responding to current affairs and new research. So it’s always changing.

SSI

What was lovely was that this was actually a group, a whole range of people, who used art or creativity in different ways, from music making to dancing to painting, all being together as one, and of course, I think because we understand that there is no absolute truth to be discovered, that then it was perfectly acceptable to try and experiment and frame in different ways. So the group dynamic of “all things had validity” was very prevalent, I think, in how we were as a group. It was perfectly acceptable to do things which you wouldn’t normally do in a group situation because the creative space allows you to do that, because you’re taking yourself out.

SSI

The size of learning groups was raised as a key discussion topic throughout the research project. Participants reported that a large part of the uniqueness of the TL experience at the college was the potential for small group work:

I think that the key here is the size, really. Maybe you can have the big lectures, but you also have to have small groups because you create completely different dynamics and connections. It’s all about relationships.

SSI

We were about 50 people ...and then we broke into smaller groups, which is much better. I would say this course that I'm on now, we're about twelve people, and that's a very nice size. Fifty is too much and one of the small things is you just don't connect to everybody.

SSI

Short courses at the College are taught by resident and/or external tutors. But importantly, in addition to academic and more traditionally-conceived "learning" guidance provided by the tutors, courses are also supported by facilitators who provide additional organizational provision as well as help participants with emotional or personal development issues that may arise. There is no clear-cut model to the workings of the tutor-facilitator-learner working dynamics and each short course varies greatly. Facilitating group processes where TL can take place, and holding and supporting the space can prove to be subtle and powerful work that requires great skill on the part of the facilitator, as one tutor commented:

I've never tried a group larger than twelve, but it is harder to hold the bigger the group gets.

SSI

Another tutor spoke with frankness on the challenges involved in facilitating TL:

It's an absolute nightmare sometimes. It's a minefield, you never know what's going to get thrown at you and of course, there is the possibility, which has occurred once or twice, that people do become unstable, mentally unstable.

SSI

Becoming unsettled, not necessarily with desirable outcomes, is an aspect of transformative learning for some, and yet without such "disequilibrium" [24] it is questionable how far a transformative experience has taken place. Ison and Stowell ([28], p. 3) suggest that:

...each learner goes through a period of chaos, confusion and being overwhelmed by complexity before new conceptual information brings about a spontaneous restructuring of mental models at a higher level of complexity thereby allowing a learner to understand concepts that were formally opaque.

Of course, transformative learning experiences cannot be "guaranteed" and for some participants, the group work in their particular course fell short of expectations:

What was not so good is the group process work. It wasn't very skillfully facilitated and there were too many times when the group got completely stuck on, "Who are we and why are we here?" and didn't even kind of understand the value of what we were doing in the group process. So, that got quite frustrating and the energy got pulled down at those points.

SSI

There is very little participative structures used and little attention is given to the process of the group, to enhance the learning. Most attention is only given to the individual rather than seeing the group as a whole so often the cultural, social and political aspects are missed. I would like to see more participative learning structures and processes be introduced. And space given for the group to talk together and reflect on their experiences and the group's process.

## SSI

There are usually a few participants who are disappointed in that there have been so many lectures, that the ecological is not extending into the societal, the political, the psychological and the spiritual, that the opportunity to develop the group as a learning entity has been missed.

Shenker ([29], p.102) describes a dichotomy within communal living:

An intentional community has two conflicting needs: to sustain continuity and be open to change. Continuity serves to give the community an identity, an historical perspective, a sense of uniqueness and mission.

Currently, the College is experiencing some tensions between the need to expand and be economically viable, and the need to maintain a reputation for “specialness” and excellence as an alternative education provider. Strong concerns were voiced by some interviewees about the growth of learning groups via increased maximum numbers of participants on short courses and new masters’ programmes. Fears were voiced about the potential this might have for diminishing the quality of the learning experience at SC. One participant commented that in the limited time span of short courses a large group size would hinder connection within the group:

They packed in thirty people...And it was absolutely exhausting...We were just on our knees by the end of the three weeks...a lot of potential got missed.

## SSI

Please don’t allow Schumacher to sell out by becoming too big or a conveyor belt of education because the living environment is what supports participants to step outside of the logical, fast paced world and begin to feel their way into a new perspective. Without this environment I don’t think the courses can be as transformative.

## Survey

## Key findings:

- Communal living has a profound bearing on the transformative potential of participants’ experiences of the College.
- Group size and dynamics were central to the experiences of those learners who described their learning as transformative.
- Managing group dynamics and determining group size is a challenging aspect of curricula design.

## 2.2. Diverse Range of Pedagogies

Education for sustainability is concerned with the nature and style of learning as much as content of learning material. Therefore, a range of pedagogies are considered critical to the development of learners and to the possibility of transformative learning. One of the key aims of this study was to learn about the pedagogies employed at SC, and how, and in what ways they related to TL, if at all. Wenglinsky ([30], p. 5) argues:

Teaching beliefs and practices conform to one of two types of pedagogies, the didactic or the constructivist.

Multi pedagogic methods can be used when employing didactic and/or constructivist pedagogies. Westwood ([31], p. 16) argues that:

No single method of teaching can be used for all types of subject matter or for achieving all educational goals.

He goes on to suggest that some direct teaching methods, such as lecturing, are essential for the early stages of learning new information, skills or strategies. At the College, it is held that a multi-method approach to learning can create opportunities for deep, reflexive learning and personal transformations. To help throw light on this approach, one survey question to participants provided a list of 12 pedagogic methods (listed below). (An option to include additions was provided.) Some would be considered “traditional” and others are considered alternative to the mainstream and utilized less often, more often in critical or alternative learning settings. Participants were asked which of the teaching and learning methods were experienced during the timetabled sessions. The results are below (Table 2).

**Table 2.** Percentages equate to the proportion of survey participants who experienced the particular approach.

| <b>Pedagogic methods</b>                 | <b>Percentage</b> |
|------------------------------------------|-------------------|
| Fieldwork and use of outdoor environment | 100%              |
| Questions and discussions                | 100%              |
| Lectures                                 | 94%               |
| Presentations                            | 94%               |
| Group work/ activities                   | 88%               |
| Experiential work                        | 82%               |
| Variety of audio visual aids             | 82%               |
| Art and craft related activities         | 76%               |
| Handouts and printed matters             | 76%               |
| Simulations/role play/games              | 76%               |
| Individual investigations                | 59%               |
| Drama and bodywork                       | 59%               |

The survey results make clear that a wide range of pedagogies are utilized and experienced at SC. Some courses employ an array of learning approaches. One tutor interviewed described her process of interweaving multi-learning approaches:

What we did was a practice of call and response. We had processes where we might have started, let’s say, with movement and then responded to the experience of the movement with writing, and then listening and then moving again, and then talking about something deeply theoretical and then working in small dialogue groups. There’s this process where I think what my work is doing is time-slicing all these different ways of knowing very, very finely and combining them together.

SSI

Whilst there is often space for experimentation, during some courses less diversity is experienced, and this stems, paradoxically, from one of the “unique selling points” of the College. Since opening in 1992, it has gained and maintained its reputation for excellence for providing courses facilitated by world-renowned experts in the many fields brought under the umbrella of sustainability. Experts include Fritjof Capra, Vandana Shiva, David Orr, as well as resident tutors, Satish Kumar, Stephan

Harding and the late Brian Goodwin. One member of the core-team asserted that the famous names attract course participants and that the “who” can often take priority over the “how” of course design. One tutor described the tendency to “bring in the experts”:

Schumacher has held a relatively unself-reflective stance about bringing in a banking model of education. Here comes the great and the good of sustainability espousing what they think. I think Schumacher as a college is coming to a greater consciousness about the importance of the educational process itself... Schumacher has been built on a relatively conventional model of education combined with the structure and nice bits of living in community.

SSI

I think that Schumacher College does two things there. First, it seeks to inform and change how we think things need to be in the world. Largely through “expert” speakers, it puts different options and possibilities on the table for people and then, second, through the ways of living at the College, and to a smaller extent, the learning processes it sometimes uses, it offers a snapshot, a taster, the tiniest of flavours of how living into that possibility might be.

SSI

For some participants their experience of pedagogy at SC relied heavily on didactic styles:

A lot of it seems to be show and tell...And discussion...when I came here that's what it was... three hours in the morning we were sat around listening to whoever was there and have a tea break in the middle...And that was it. And you know in some ways it was fab because in 1998 what was being discussed was so radical – that was the bit I was here for - but now that would be deeply unsatisfying...

SSI

Criticism of didactic delivery was also raised by some participants when an earlier (2002) study reviewing the learning process was undertaken as an internally commissioned report to the College. But for one tutor in the present research, different pedagogies are applicable in different circumstances:

There's nothing wrong with lectures, but it's about choosing when is it right to offer a lecture and when it not to, rather than having it as an unaware default position. There is a place for straight lecturing...a place for propositional knowing. But that's kind of like the spice that needs to be sparingly used in a very rich cake of experiential and presentational knowing.

SSI

Scheduled “time for reflection”, whether individually or as a group, was highlighted by several participants and tutors as an important learning experience at SC:

...in terms of reflection, at various points within the course...I could go outside and actually use nature as part of your thinking and being and learning. So, actually being outside in an environment where that was appreciated and thinking about light and colour and the natural world, if I can put it that way, being part of the wider sense of knowing and being.

SSI

We're gonna do an exercise with them on the first afternoon so that it takes them out of their normal going for a walk in nature. So it will be in a sense opening up the possibility that we can

actually communicate with the non-human world and how do we do that and what happens and what do they hear? So we'll be asking them each afternoon to just go off and sit and see what the land had to say about the morning session.

SSI

Key findings:

- Learning at SC is mostly characterized by a diverse range of pedagogies.
- Some research participants on some courses experienced learning at SC as old-fashioned and stuck in transmissive modes.

### 2.3. *Learning as Co-Creation*

One tutor who regularly co-tutors short courses at SC describes her worldview as “participatory”; “seeing the patterns that connect, seeing systemically”. Her view of learning is that it is both a practice and a process:

Learning as something that is a slow and deeply satisfying and lifelong practice...Learning is an embodied process that might be sometimes led by the intellect but also there's embodied knowing we later make sense of intellectually.

SSI

TL for the tutor is:

Narrowing the gap between our espoused theory—what we think things need to be like, and our theory in use—how we actually act.

SSI

The tutor's commitment to a participatory worldview and a shared enquiry is put into practice via the emphasis placed on the short course participants' questions or central inquiry. So in preparation for the course the tutor asks participants to prepare in three ways:

To be prepared to introduce themselves to each other...Second, we sent every participant specific readings beforehand. Then, the third thing was that we asked the participants to articulate as best they could was the inquiry question that they were bringing with them to the event.

Her and her co-tutor are not presenting themselves as experts, imparting knowledge but instead are co-inquirers alongside the participants.

I really want people to come well prepared in terms of “why am I here?”, “what is it that I want to achieve?”. I really want to know that stuff. That doesn't mean to say it can't change during the program, but I want to condition the space for people to arrive and be very, very present to their inquiries. It's rigorous. I want to be demanding in this work. I think it's absolutely necessary for us to be demanding of each other.

SSI

A subtle distinction is drawn between responsiveness and structure:

I am a co-inquirer. That was borne out in practice. I wasn't trotting out the same old material; I didn't know what I would be saying at any given moment. It was very responsive. We designed

a basic process but within that, there was a lot of flexibility. My expectation and the reality was that it was a genuine inquiry.

SSI

On the subject of open-endedness and space for emergence, the tutor says:

We're starting a process but I don't know how the process is going to finish. And all the way through, there is this negotiation, which is neither a negation of expertise nor is it about being entirely led by the participants and trying to please them; it is about working and to be responsive together.

SSI

Later, elucidating how to be responsive to co-enquiry work, she explains:

People are inquiring into their own questions. We do this visually, we do it with movement. We do it with dialogue. Participants are working as a whole group all the time, so everyone gets to do it. It's not a my turn, your turn thing. It's everyone all at once...People will be exploring their questions throughout. For example, we might have a session and then do some writing that asks; "what's the impact of this on your learning now?", and then share the results with others, and finally bring comments back into the whole group...One person said, "I want to explore my enquiry question through the body." That became the framing for the session. It was very specific and not at all wishy-washy. We negotiated together about how we might do that.

SSI

The relationship between expertise and her experience, and confidence in co-creating learning during the short course is nuanced:

I'm bringing in some degree of "proper" expertise to that because I've got experience facilitating that kind of thing, but I'm not bringing in a fixed technique. I'm looking very carefully and checking out with other members of the group, are they going to get the learning they want as well, while we're attending to one person? Is this going to do the job?

SSI

A co-enquiry approach to tutoring is in many respects a radical departure from the traditional relationship between teacher and learner; where the former has more knowledge, power, expertise, and adopts an active stance, whilst the learner is more receptive and passive. A participatory, and co-created learning experience does not do away with the role or responsibility of the tutor but instead enacts the belief that all members in a group can contribute to their own learning as well as to the learning of others Heron and Reason, [32]. Intellectual learning is seen as one approach amongst others, and embodied learning is considered equally valid. Co-enquiries might be termed "risky" as traditionally-modeled learning outcomes are difficult to anticipate or specify beyond an indicative level, thus posing a possible challenge to providers, assessors or auditors who are required to be specific about outcomes and results. However, spontaneity and aliveness to the inquiries of participants might help facilitate or indeed be necessary to foster TL. Other than courses run by college faculty staff, the College does not input into the design of short courses. Therefore, the co-enquiry approach is not a requirement of visiting tutors as such, and our research evidence suggests that on some short courses transmissive teaching methods are adopted. One limitation of the present research project is that we adopted an invitational, rather than systematic approach to data gathering. A thorough analysis of a purposive

sample of courses to analyse the extent and frequency to which traditional pedagogies are adopted or departed from was not possible.

Key findings:

- Designing and facilitating TL experiences is a collaborative endeavour that requires a strong mandate and support from within an organization. It cannot work satisfactorily as a “bolt on” in an institutional setting where a transmissive mode of learning is otherwise the dominant ethos and practice.
- TL experiences can take educators into territory that might be termed “risky”; often requiring emotional honesty, courage to step into the unknown and timetable “space for emergence”, and personal support within the curricula. It is not neutral work.

#### 2.4. *Space for Emergence/Epiphanic Moments*

Whilst the pedagogic experience varies from course to course, nevertheless there is a sufficient body of reports of transformative learning experiences, both as part of this study and previous evidence, to substantiate the College’s reputation in this regard. Ball’s study [24] (referred to above) explored the transformative learning experiences of 14 adult learners in relation to their development of a sustainability ethic. From the data, he developed a five-part model of transformation that includes “Break-out or metamorphosis” within the phase entitled, “Responses to the disequilibrium: making meaning”. Ball describes how an aspect of this experience is:

A break-through into previously unknown dimensions...an experience of being lifted up and out of the everyday, Ball ([24], p. 261).

Similarly, the Center for Transformative Learning, University of Toronto, states that transformative learning involves experiencing:

...a deep structural shift in the basic premises of thought, feelings and actions. It is a shift of consciousness that dramatically and permanently alters our way of being in the world. Such a shift involves our understanding of ourselves and our self-location: our relationships with other humans and with the natural world, Morrell and O’Connor ([33], p. 30).

Corroborating these claims, many Schumacher participants in our study described learning experiences that had a “Damascene”, or “epiphanic” quality to them; experiences that were pivotal and had “a before and after” quality. Reflecting on a pivotal learning moment at SC, one short-course participant describes:

I would think of awe, I would think of majesty and I would think of light entering darkness and I would think of colour but with dark around it.

SSI

The experiential learning moment described above emerged from a group coastal walk led by SC’s resident ecologist. The length of the walk equated to the age of the Earth and each step was half a million years of the planet’s history. The tutor told the story in such a way that the development of life on this planet was related to the walkers’ experience of the immediate environment, *i.e.*, when the tutor

was talking about how the sea formed and about how that happened in the planetary time the group was by the sea:

Towards the end of that walk, we got to the very last bit of the kerbstone...and he then theatrically produced a tape measure and he pulled it out to about a metre long, he then put that from the kerbstone and he referred to two millimetres from the end...We'd just walked 4.6 kilometres and two millimetres from the end was the appearance of human life on the planet. He invited us to touch the earth, to actually feel the solidity of the earth beneath us and, in doing so, I had this tremendous pre-reflective experience which I would describe as an immense feeling of awe and majesty and power which you could say was fire or earth spirit or connection or relationship...But it was immediate and physical and I could literally feel that now. That was amazing and I have done that, reconnected with that sense of feeling over time. I can go back and put myself in that position and literally touch and feel that power.

SSI

This participant holds leadership roles in two organisations and following his epiphanic learning experience at SC has made some changes in one organisation that involve opening up spaces for his colleagues to explore their creativity. In addition the participant is studying a professional doctorate around epiphanic moments and personal change:

As an organisation, over the past 18 months, which has followed on directly from Schumacher, I have been creating spaces for people to do, be creative, whether that's through appreciative enquiry, which we run as a major summit and have had business success off the back of, to everything from we have a coffee circle in the morning with a whole heap of creative stuff...trying to understand whether creating space is for people to express their creative news leads to change about them, their relationships with others and also does that lead to something for the organisation? I think it does and that's what the enquiry (the participant's professional doctorate) is about really.

SSI

The sense of being profoundly moved and experiencing learning as physical, intellectual, and creative as well as life-changing was felt by other research participants:

I had a truly "Gaia moment" when in the garden doing the exercise...where we partnered with someone with my eyes closed.....I truly realised that my out breath is part of the cycle of wind energy and though I would have regarded myself prior to this as being really nature centric this was a connection that had never dawned on me and really tapped into the tangible element of being part of the web of life at a very deep profound level and for me one of I would say of spiritual transcendence.

Survey

I cannot live the way I lived before attending the course. I am changing the way I live—I'm in transition.

Survey

The notion of community—collaboration—both as an opportunity for further self-realization (through other) for greater creativity and transformational potency was probably the most important gift.

Survey

For others TL does not happen in revelatory moments. Reflecting on transformation, one tutor described experiencing "slow burning epiphanies":

I haven't had a sudden "Damascene" conversion. I'm not sure whether that's how change happens most of the time for most people, although it's held up as being somehow a good thing. When the lightning bolt suddenly hits and then I realised this, that and the other. But what I can say is if I've had significant kind of "ah-ha" moments, that there's a relaxation about them...Realisations and slow epiphanies have come for me, sometimes, through reading. I remember years ago, reading Thomas Berry's *The Dream of the Earth* and that was like a veil being lifted. Oh! It was like being given permission to be different.

SSI

The slow burn epiphany was experienced by other short course participants:

I do not believe that there is an experience as itself; it feels a process, a kind of journey that keeps unfolding until now, once we are exposed to such an environment full of ideas and experience over nine months.

Survey

A shift in perception during the course came about due to shared experiences with others that brought intellectual understanding into a felt experience.

Survey

The aims and objectives of the qualitative study did not involve judging whether or not SC fulfills its strapline: "Transformative Learning for Sustainable Living". However, there were many instances where participants claimed to have experienced a breadth and depth of learning and personal change that is largely consistent with theories of TL. This experience was also reflected quite strongly in evidence gathered for the 2002 research referred to above, so the College has an established and recognized track record facilitating TL. Below are some key quotes from the current research which further testifies to this:

It made me brave to be experimental and you could frame it as an experiment. It allowed me to have more of a voice, and a way of being than would traditionally be within a more mainstream, academic institution.

SSI

It changed and expanded the way I see everything. Made me realise the need to get out of my comfort zone, the importance of building connections with others in order to contribute to a better world.

The following fourteen quotes derived from the Survey:

I perceive the world very differently now, and find myself thinking of people who are struggling in the world with more understanding and empathy. I try not to take the natural world for granted, and every day look at nature with new eyes. I now see things I couldn't see before.

The elaboration of Gaia theory by Stephan Harding did affect my perception of the natural world.

The stimulus provided over the course brings endless reflections, developing new perceptions, ideas and opinions. Therefore, the way each [of us] lives—and interacts—is shifted.

It helped me realise a connection I already knew but gave me the confidence to start to live it, despite the predominant worldview being in contrast.

I have a new vision of my future, one where I seek to bring change to my life and to the lives of those around me.

Now I have a clearer idea of what I want continue to learn and deepen and in which way.

Months later I am still considering my experience and reflecting on how I am going to change my life and work towards a world I am proud to be a part of.

It hasn't made it easier to live in the world. It has taken two years to begin to fully integrate the experience into my life.

Extended my knowledge of new approaches stimulating and implementing transformation and assisted with my enthusiastic return to this area of professional activity.

Made me rethink my actual job and build a plan of living it and starting all over again.

I have completely changed all my life and my professional way.

I have built a new network.

I am considering changing the direction of my career to something more in line with my new and emerging philosophies.

In sum, transformative learning experiences appear to emerge from the nature of the total "learning system"; that is the interaction between:

- the intent and learning design/pedagogy of the tutor/facilitator,
- the state of readiness of the learner(s),
- the size, dynamics and duration of the group, and
- the ethos and particular quality of the learning environment.

At the College, this interaction is conducive to transformative learning, but such experiences are not inevitable. The question then arises, how much are such elements applicable and reproducible in a mainstream HE environment.

Key findings:

- (1) Many SC learners experienced intense and profound moments that irrevocably changed their relationship with society and the natural world. These were attributed directly to the pedagogic approaches employed.
- (2) Some tutors offered a radical, participative approach that pushed the boundaries of traditional teaching and learning considerably.

### 3. Comparing the Mainstream and the Marginal

Moore ([34], p. 326) states that universities are intended to be spaces where paradigms are challenged, creativity is promoted and new knowledge is produced. In contrast to that aim, M'Gonigle and Starke ([35], p. 147) describe the present times as the "age of economism", and assert that in the 21st century, major Western universities are in the business of generating well-trained producers and well-socialised consumers. In 2011, we published a paper that considered the relationship between mainstream HEIs and alternative, civil society colleges. We sketched two models of higher education, (the "ecological"—overtly espoused, developed and enacted by SC—and the "economistic", reflected to some degree by most UK universities), and considered their interaction drawing on wider thinking on the principles, challenges and tensions of pursuing sustainability, institutional learning and change [36].

Whilst it is useful to delineate between different models of education such as ecological/economistic in order to point to general trends, some caution is required. The boundaries between ecological/economistic and marginal/mainstream are in reality more fluid and the relationships more

complex than might first appear. We have asserted that the College is a different entity to a mainstream HEI and operates independently of the sector. This is the case insofar as SC is expressly concerned with societal change towards a sustainable future, and the development of an ethic of care towards the natural world. SC provides an immersive community for all course participants, masters and short courses. Access to the natural world is readily available to the college community as SC is situated on a beautiful country estate, and all courses either directly access outdoor learning spaces as part of the experiential learning experience or schedule time during courses for participants to explore the natural world. Furthermore, most courses are one week in duration unlike the average three years for an HE program. The college community is a small (maximum 50 people), self-selected group of people who have some similar interests, and to some already extent shares the values of SC given the significant financial and time commitment made by individuals to attend a course. Participants are adults often of mature years, and are attracted by the College's reputation and orientation: to this extent the student body is more similar than that in any HEI.

However, there are more similarities between SC and a mainstream HEI than might be expected. Much innovative pedagogy is developed, practised, and its effectiveness researched at HEIs. In 2005, Plymouth was awarded close to 25 million pounds of HEFCE funding for four Centres of Excellence in Teaching and Learning (CETL) that rewarded excellence and innovation in several pedagogic areas existent at Plymouth, and funded the furtherance of that work for five years. The Centre for Sustainable Futures was one of the CETLs with a mandate to infuse Plymouth's curriculum, campus, community and overall culture with sustainability. Post CETL funding, sustainability has been formally embedded at the university and is now a super Key Performance Indicator as well as a "core value". SC has not been independent vis-à-vis post graduate course provision; its masters programs are awarded, validated, and to some extent taught, by Plymouth University. Both institutions are increasingly driven by marketisation and pressures to prove competitive advantage. Whilst mainstream HE has had to comply with learning outcomes and quality assessment and assurance processes for a number of decades, SC is now facing increasingly rigorous standardisation including inspection by the QAA. As a result, the College has started to review its learning processes, developments to which this study will contribute. Whilst SC has more freedom to develop innovative pedagogies as course tutors do not follow specific guidelines, it does not mean that innovation is always experienced. The assumption that marginal *necessarily* equates to radical and alternative was challenged by our data. Further, the marginality of SC has led some to critique it for a certain "stuckness" and lack of self-reflexivity around its own, institutional learning. One facilitator highlighted the importance of organisational reflexivity and iterative learning in relation to TL:

A group of students living at Schumacher cannot go through a transformative experience as a whole group unless the whole organisation is in a transformative learning experience itself.

#### 4. Transferability to HEIs

Many theorists [10,16,35] claim that TL is necessary to engender the kinds of shifts in thought and action required to meet the challenges facing our planet. Therefore, the issue of the transferability of niche or marginal experiences—that studies show engender TL—to a wider learner population in

diverse settings is important, as alternative civil society colleges will by their very nature only reach small numbers of learners.

For Ball, many young adults are encouraged to “stay in classrooms they find boring or take low-end jobs” ([24], p.265) and that neither is likely to contribute to transformation in the direction of health for the planet and for future generations. As the sustainability agenda gathers momentum and increasing numbers of HEIs in the UK compete in such initiatives as the People and Planet Green League and the Green Gown Awards, and interest grows in the relationship between quality and sustainability education [37], the transferability of deeper learning and innovative pedagogies, tried and tested in institutions on the margin could assume real significance. At the same time, questions of feasibility remain.

Not least, the immersive and intimate qualities of the learning experience at Schumacher College are not easy to reproduce in a mainstream setting. Yet one SC short course tutor, who facilitates learning within and outside of the mainstream HE sector, and describes her pedagogy as a dynamic, co-enquiry is positive about the possibility for TL experiences to travel to mainstream HEIs:

The physical setting [of SC] helps but I don't think it's necessary...I've done some really wild work in some very dull offices.

SSI

However, this is no small task. The commitment, facilitation skills, time and space within an already full curriculum, for emergence and transformation to occur poses serious challenges, whilst Ball's argument [24] that TL requires supportive networks amongst students is also a challenge. Further, an Open University practitioners network, Systems Practice for Managing Complexity (SPMC), suggests:

To understand and deliver a pedagogy which enables and provokes students to move across levels of epistemic competence is in itself challenging. To do so requires an awareness on the part of the curriculum designer and personal tutor so that they can facilitate these changes...it is not always clear that academics and tutors have these competencies themselves SPMC [28].

One tutor interviewed concurred with this statement, mentioning the need to be prepared “not to know”:

I think the constraints on this kind of work are lack of confidence or experience or legitimacy, belief, permission giving, from those who are commissioning or preparing the session. It's [about] being comfortable with being uncomfortable, really, with not knowing. Also, there's this whole thing around how people construct curricula at every level...Are the curricula set up to prepare people to cope, survive and do well in the industrial growth society? Or are they consciously designed to question that paradigm?

SSI

The issue of “value-neutral” education, possible or desirable, explicitly recognized or unrecognized, is another area which has bearing on the possibility of TL in the mainstream. The literature around TL generally agrees that TL for sustainability cannot be a neutral process as one tutor argues:

This is not neutral work, this is work that has very specific intentions...If a university has a set of “one size fits all” criteria, that's maybe not so helpful...If...there's pressure to “sausage machine” undergraduates through, then clearly it's more difficult to design processes that

facilitate the depth of relationship that I would associate with transformative learning...Education for sustainability simply cannot be about just fitting in to the existing system because the existing system is designed to enable people to live and survive within the industrial growth society. The structure needs to be allowed to evolve and change...I think that it can be done elsewhere but we need to get the mandate from somewhere to do it. The strongest thing is having a mandate from within the organisation to do it.

SSI

These points raise questions about the extent to which mainstream HE can adopt more transformative pedagogies. Moore ([34], p. 86) asks whether higher education is ready for transformative learning, and whether students are mentally and emotionally prepared, and “whether the academic institution has the ability to foster and nurture these type of experiences”. Haigh’s [38] experiences teaching a geography course at an established university suggest that implementing TL pedagogies is difficult, that students are able to “protect themselves” from the more unsettling aspects of challenges to their belief systems, but that the resultant questioning of learners’ worldviews was nevertheless worthwhile.

## 5. Conclusion and Future Directions

This research project aimed to gain insights into the nature of transformative learning at Schumacher College. Research questions focused on whether learning at the College led to significant personal and transformational change, and if so, to what extent such experiences could be attributable to the pedagogies employed.

Below is a list of key findings from the study:

- (1) Communal living has a profound bearing on the transformative potential of participants’ experiences of the College.
- (2) Group size and dynamics were central to the experiences of those learners who described their learning as transformative.
- (3) Managing group dynamics and determining group size is a challenging aspect of curricula design.
- (4) Learning at SC is mostly characterized by a diverse range of pedagogies.
- (5) Some research participants on some courses experienced learning at SC as old-fashioned and stuck in transmissive modes.
- (6) Designing and facilitating TL experiences is a collaborative endeavour that requires a strong mandate and support from within an organization. It cannot work satisfactorily as a “bolt on” in an institutional setting where a transmissive mode of learning is otherwise the dominant ethos and practice.
- (7) TL experiences can take educators into territory that might be termed “risky”; often requiring emotional honesty, courage to step into the unknown and timetable “space for emergence”, and personal support within the curricula. It is not neutral work.
- (8) Many SC learners experienced intense and profound moments that irrevocably changed their relationship with society and the natural world. These were attributed directly to the pedagogic approaches employed.

- (9) Some tutors offered a radical, participative approach that pushed the boundaries of traditional teaching and learning considerably.

The last element of the research interest was in how far transformative pedagogies might be employed in mainstream HE settings. This needs to be seen in a wider context. Recent education reforms are precipitating re-examination of the role of education in society and of the core process and functions of universities. Meanwhile, the scope and scale of the challenges of unsustainability provoke questions pertaining to our values and behaviours, and require responses that go far beyond technological fixes. The rising sustainability agenda challenges traditional disciplinary boundaries and pedagogies, whilst student demand may well act as a further driver to the sustainability agenda in HE.

At the same time, it appears that there is a degree of convergence between the two HE arenas of this study. Differences between the radical and mainstream education are being eroded by increasing standardization within the marginal sector, whilst what were marginal, sustainability concerns such as the ESD agenda are gaining prominence in HE, along with interest in innovative teaching and learning pedagogies. If the gap between the mainstream and marginal is narrowing over time, it may be that establishments such as Schumacher College need to and can play a stronger pioneering role in advancing, testing and mapping out new purposes, research and pedagogies that higher education could bring on board more centrally through enhanced partnerships. The Plymouth–Schumacher College partnership to date has, to some degree, evidenced this [36]. Much potential remains, but it is unclear how far this can or will be more fully realised in future years. An initiative (referred to earlier in this paper) is currently underway at the College to review, reflect on and improve the teaching and learning process and strategy, and one of the authors is helping mentor this work, not least to see how far mutually beneficial dialogue and learning can be further developed between the two institutions.

Ideally, transformative learning requires a whole system response, valuing a participative, collaborative and explorative approach to the design and methodology of learning: how far this is possible in a mainstream setting remains an important but open question.

## Conflicts of Interest

The authors declare no conflict of interest.

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