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# Developing a Pedagogical Approach with the Aim of Empowering Educators and Students to Address Emerging Global Issues such as Climate Change and Social Justice: A Case Study

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**Abstract:** The "Green Nudges" program, developed within the framework of the United Nations Environment Programme (UNEP), is based on behavioral science and nudge theory. Aimed primarily at universities, it explores ways to adopt a more environmentally friendly lifestyle. Studies show that many young people recognize climate change as a major problem but that it leaves them feeling helpless and anxious—something that our teaching practice confirms. As we had had no success teaching sustainability using conventional approaches, we used the pedagogical design capacity (PDC) principle to develop a novel workshop format and implement it in a pilot series of three repeated workshops. The workshop concept is based on empowering educators and students to tackle emerging global issues while also boosting critical thinking, field research, and teamwork skills. An important part of the integration of different tools was based on supporting students' self-direction and knowledge- and evidence-based decision making. The results demonstrate that the proposed pedagogical framework resonates with and empowers students. At the same time, the workshop empowers educators to competently navigate complex and sustainability-oriented topics within the field of education for sustainable development (ESD).

**Keywords:** green nudges; education for sustainable development (ESD); pedagogical design capacity; behavioral design; design thinking; 12 SDGs



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## 1. Introduction

In 2020, within the framework of the United Nations Environment Programme (UNEP), which dates back to 1972 and is responsible, among other things, for the implementation of the 17 sustainable development goals (SDGs) [1] within the 2030 Agenda for Sustainable Development [2], the "Green Nudges" program [3], aimed directly at universities, was launched. That same year, *The Little Book of Green Nudges* was published [4]. The main goal of the program is "to inspire up to 200 million students around the globe to adopt environmentally friendly habits and greener lifestyles" [5]. It is UNEP's first program that is based on behavioral science and nudge theory. It focuses on human actions while examining ways of changing them.

Earlier in the 20th century, behavioral insights, through incentives and nudges, had already been practically deployed in government projects and in advertising campaigns within the scope of consumerism. The development of nudge theory is associated with the work of Amos Tversky, who was a key figure in the discovery of systematic cognitive bias in humans, as well as in the field of risk management. Along with Daniel Kahneman [6], who worked in the fields of the psychology of judgment and decision making and behavioral economics, they influenced Richard H. Thaler, whose research focused on behavioral economics, which he expanded on by incorporating nudge theory. Together with Cass R. Sunstein, they popularized the "nudge" concept itself in the book *Nudge: Improving Decisions about Health, Wealth, and Happiness* [7]. We now use the term nudge (or nudge

theory) to refer to the use of unobtrusive stimuli to induce a desired behavior. Green nudges include, for instance, "eco" or "organic" labels on products, the use of smaller plates in canteens in order to reduce food waste, the inclusion of infographics on bills or documents illustrating an individual's energy use in comparison with that of other users (e.g., in the neighborhood or city), and other such ways of encouraging environmentally friendly choices and sustainable, or "green", behavior.

The UN's Green Nudge initiative now takes us directly into the field of youth education. Studies show that as many as 77% of Europeans recognize climate change as a very serious problem. More telling still is the fact that "the younger the respondent the more likely they are to mention climate change" among the most serious problems facing the world as a whole, with 52% of 15–24 year olds doing so compared to 43% of those aged 55+ [8] (pp. 22–23). It should be further pointed out that global studies show that more than 50% of young people, clearly aware of the seriousness of the climate change problem, feel "the following emotions: sad, anxious, angry, powerless, helpless, and guilty". Moreover, "more than 45% of respondents said their feelings about climate change negatively affected their daily life and functioning, and many reported a high number of negative thoughts about climate change (e.g., 75% said that they think the future is frightening and 83% said that they think people have failed to take care of the planet)" [9] (p. e863).

In our perception as educators and researchers, similar reactions and feelings are prevalent among our own students as well. Whenever we prepared content that highlighted the urgency of the topic while encouraging a different response aimed toward sustainability, discussion with the students revealed a high level of anxiety and a strong sense of powerlessness. With conventional educational approaches clearly proving inadequate, we pondered the development of a different, more active approach: one that would facilitate the in-depth exploration of the often-complex theory through a combination of a hands-on method and tools in the form of specially designed workshops. With the "green nudge" initiative steering us primarily toward (re)designing services that help us achieve something, we chose postgraduate students of design as the test target audience for research into green nudge theory in the context of promoting the popularization of sustainable behavior and the topic of sustainability within the project. One of our key objectives was to situate the concept of sustainability—as theorized by Bill Reed [10]—firmly in the context of regeneration, with a clear understanding of the so-called Doughnut Model developed by British economist Kate Raworth in her book *Doughnut Economics: Seven Ways to Think Like a 21st Century Economist* [11]. Both regenerative design and the Doughnut Model wonderfully complement the 17 Sustainable Development Goals [1] since all three approaches advocate human well-being and capabilities while acknowledging and respecting the nine planetary environmental boundaries previously laid out by Johann Rockström in collaboration with a group of scientists from the Stockholm Resilience Center [12]. In other words, the combination of all three of these—in part, highly complex—theories and approaches intersects at a point that forces us to focus on designing solutions that will not only preserve the environment but also help regenerate it while, at the same time, being socially beneficial for all of us living on this planet.

With this intersection established, the next step was to propose a thesis: by consciously weaving together green nudges and design, we can not only directly address the UN's 17 Sustainable Development Goals but also offer a response to the International Panel on Climate Change (IPCC)'s report "Climate Change 2022: Mitigation of Climate Change". According to the report's authors, the nature of the global challenge demands an expanded sociological perspective on the problem of sustainable behavior. It is the only way to achieve the much-needed inclusion of new actors and perspectives. This is important because "it (i) provides more options for climate mitigation; and (ii) helps to identify and address important social and cultural barriers and opportunities to socioeconomic, technological, and institutional change" [13] (p. 117). The above leads back to education, which is regularly identified as "one of the keys for achieving sustainability and also one of the targets for a sustainable society" [14] (p. 1).

In addition to UNESCO's document "Global Action Programme on Education for Sustainable Development" [15], a number of recent texts, including those in this journal, address the importance of the intensive integration of sustainability-related topics into education in order to help us, as a society, accelerate the sustainable transition [16–19]. This text thoughtfully integrates the aforementioned "green nudge theory" into the given context, namely the urgent need to expand the scope of sustainability-related topics in education through a measured introduction of design thinking. The practical validation of the introduction of pedagogical design capacity (PDC) into the context of education for sustainable development [20] represents a further enhancement of the above.

By designing and delivering three repeated workshops, we also practically examined ways of engaging students in complex, real-world problems and spurring them to analytically engage with existing scientific information and conduct ethnographic research in order to gain vital insights (including in the area of ethical and social values). They were encouraged to use an evidence-based decision-making process to design proposals while also continuously testing, evaluating, and iterating on the basis of their findings. A very important part of the research involved observing and analyzing which topics within the broader fields of sustainability and green nudge theory appeal to young people and identifying opportunities for a deeper examination of the content and empowering the students in their everyday actions. In case of a positive outcome, the key long-term objective of the research was to provide a foundation for the development and formalization of a specific sustainability education (e.g., a mini-course with certificate of completion) focusing on behavioral design based on green nudge theory.

## 2. Materials and Methods

Nudge theory builds on an understanding of the psychology of decision making. In most situations we find ourselves in, our capacity to make sense of a complex and uncertain world is limited, so we often take mental shortcuts. We fall back, for example, on "doing what others do", or, given a choice, "choosing the easiest option". In addition, much of our behavior is automatic—we often follow entrenched routines, acting habitually, as if "on auto-pilot". Accordingly, when developing the structure of the workshops, we set out to examine how an understanding of cognitive processes can alter the choices available to us. We further set out to examine how a particular choice can be promoted through the formation of a "choice environment"; in other words, by expressly designing choices with the aim of exploiting or overcoming typical cognitive biases in the form of mental shortcuts. Emotional context can play an important role in the latter in the sense that associating a positive emotional experience (an anchor point) with knowledge acquired about a change can potentially result in a long-term change in behavior. The latter was key to our approach in designing the workshops as we wanted to overcome the negative reaction we frequently observed in students when discussing the rationality of sustainable action.

Since our primary target audience was postgraduate students of design who are familiar with the tools of design thinking, we combined the latter with behavioral science approaches in order to simplify the transition to a sustainable society. The combination with design enabled us to leverage the fact that designers are uniquely positioned to transform how and what services and things are made of. This, therefore, accounts also for tackling the climate issues of our time. To put it differently, overconsumption, wasteful production, processes, and the use of materials are all related to poorly designed systems, products, services, and policies. As Justin McGuirk explains,

> *Contrary to what we might assume, wastefulness is not a natural human instinct—we had to be taught how to do it. Disposability was one of the great social innovations of the post-war years. When the first disposable products became available in the 1950s, from TV-dinner meal trays to plastic bags, consumers had to be persuaded that this magical new substance—plastic—was not too good to be thrown away. They had to be instructed in the advantages of the throwaway society*. [21] (p. 10)

It would seem that much like different and often unsustainable behaviors needed to be deliberately taught to us, we are now facing a challenge that once again requires us to devise ways of fostering a change in behavior. Selected studies [22–24] show that the best way to tackle sustainability issues is not simply researching how and why people make their everyday decisions, but also to make use of the tools and methods of design that can help us shift human behavior toward sustainability. Behavioral design, a combination of behavioral science and design methods, can inspire radical ideas, create environmental, social, and economic value, and deepen knowledge about our choices and well-being [25]. Or, as Grilli and Curtis state, different approaches to changing and shaping environmental behavior are now in place and in use: awareness raising and education, social influence, rewards, nudges, and behavioral insights [26]. We put the above into practice in three deliberately repeated workshops.

### *2.1. Workshop Design*

When designing the workshop, we sought to develop an approach that would allow us to adapt the content to changing social and cultural contexts and thus respond to emerging global issues such as climate change and social justice. As mentioned previously, one of the objectives was to examine the possibilities of cultivating an interest in actively engaging in changing students' behavior toward sustainability; the second extremely important objective was to establish a framework for the empowerment of educators to successfully address the complex issues we are presently facing. In the latter, we weighed different approaches to adapt learning so that it moves beyond abstraction to make use of the pedagogical design capacity framework [20,27] while taking into account UNESCO's recommendation for how to approach sustainability issues in education [28].

Beginning with the objectives we set, we designed a five-day workshop (Table 1) which was based on co-design approaches [29] and oriented toward fostering critical thinking skills by providing a framework for self-direction and using the insights and findings gained to encourage autonomous and knowledge-based decision-making. An extremely important part of the workshop design was to enable students to independently identify sustainability-related topics within the broader context of sustainability, allowing them to choose topics that closely aligned with their interests and that they were able to explore locally. This approach gave them the opportunity to further explore their own values and attitudes toward local sustainability problems while developing proposals which, if successfully implemented, could lead to positive impacts in both their local community and their personal lifestyles.

**Table 1.** A structured view of the 5-day workshop design.

| | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---|---|---|---|---|---|
| 9:00–9:30 | Introductory lecture | Preliminary desk research on the intersection established the first day | Synthesis and choice of focus (the problem identified during field research) | Lecture on data visualization | Finalization of concepts and results (evaluated on the basis of the previous day's testing) |
| 9:30–10:00 | Short questionnaire | Field work: participant observation, interviews, etc. | Ideation phase using tools: HMW, HMW voting, Crazy Eights and selecting a concept for further development | Peer feedback on concepts and poster design | |
| 10:00–10:45 | Lecture on sustainability | | | | |
| 15 min | Break | | | | |
| 11:00–11:45 | Team formation and community canvas task | Continuation of fieldwork and insight gathering, including the first quick tests when the situation permits | Development of the selected green nudge concept (with occasional internal consultations) | Various activities: iteration of concepts according to feedback; retrieving missing data; development of improved solution; preparing for additional field testing | Preparing presentations |
| 11:45–12:05 | New Lexicon #1: choosing three keywords and outlining their general meaning | | | | |
| 12:05–13:00 | New Lexicon #2: Building a deeper understanding of the selected keywords through reading scientific and expert texts | | | | |
| 1 h | Lunch break | | | | |
| 14:00–14:45 | Additional reading | Interim consultations | Designing a poster by formulating answers to 6 questions | Interim consultations | Public presentations and the awarding of certificates of completion |
| 14:45–15:15 | Discussing the materials read | Analyzing the insights gathered and identifying opportunities (Affinity Diagram) | | Guidelines for final presentations | |
| 15 min | Break | | | | |
| 15:30–16:00 | New Lexicon #3: Re-envisioning of the updated explanations; mindmap | Continuing the analysis of the insights gathered | Continuing the design of a poster by preparing answers to 6 questions | Additional field testing of improved concepts | Short questionnaire (KALM or Mentimeter) |
| 16:00–17:00 | Short presentations or delivery of 1st blog post | Interim consultations or delivery of 2nd blog post | | Interim consultations or delivery of 3rd blog post (covering Wednesday and Thursday work) | Recap: report writing or delivery of the 4th (final) blog post |

As Table 1 shows, after an introductory lecture, the main intent of which is to establish the technical framework of the whole week (without disclosing the research topic), the workshop opens with a short questionnaire. The students answer the anonymous questionnaire individually without any prior suggestions or instructions of any kind. The two questions—with no wrong answers—in our case were the following: *(1) If you had the power to change one thing in society, what would it be? And why? (2) And conversely: what is the one thing in our current society that you are absolutely happy with and wouldn't dream of changing?* In its own way, this task would set the tone for the entire week. The answers were very honest, as well as revealing, as they also very clearly showed the cultural and social characteristics of the students' varied backgrounds. This was followed by a long-form lecture establishing the broader context of the research topic within sustainability, the significance and role of regenerative design, and the explanation of two theories: (green) nudge theory and the theory of change (the theory emphasizes what we want to achieve rather than what we want to do). The rest of the first day was primarily devoted to forming groups and collectively generating a simplified community canvas [30]. The latter, in order to increase the effectiveness of collaboration within the interdisciplinary group, helped the group members establish a shared motivation, define common values and identity, and reflect on what they consider success (including in terms of group success at the end of the workshop). This step is supremely important as all the substantive decisions subsequently taken by the group either derive from or are tested and validated against these four common principles.

The first substantive decisions follow on the same day. In the first two workshops, students narrowed down the topic by selecting three concepts/phrases from a set of 9–10 keywords thoughtfully derived from the aforementioned theories and concepts: the UN's 17 Sustainable Development Goals, Bill Reed's interpretation of sustainability in the context of regeneration, Kate Raworth's concept of Doughnut Economics, understanding the implications of the nine planetary environmental boundaries, and, finally, the role of behavioral science in design. The background to the selection of the chosen keywords was based on opening new perspectives and approaches to the understanding of sustainability, which the students then gained in the next step through readings of the listed selected authors. The third workshop was completely open-ended; we simply asked the students to choose a focus within the broader topic of sustainability that was closely linked to green nudges. The three subsequent steps, which we called the *New Lexicon*, led them from establishing a general meaning to a very in-depth understanding of each of the selected concepts (arrived at with the help of a selection of scientific articles and individual chapters from the professional literature). Building on the newly acquired meanings, they subsequently mapped out the existing as well as overlooked or, potentially, new relationships between the selected keywords. This could be carried out in the form of an exercise involving, for example, the establishment of new meanings and descriptions for the new lexicon, or even simply in the form of a mindmap. It is already at this juncture that participatory learning is introduced and higher-order thinking skills, on both sides, are being fostered [28]. It is impossible for the teacher to know in advance which combination of keywords the students in a group will pick; as a result, considerable adaptability is required on the part of the educator, mostly in the sense of the ability to guide discussions and further research opportunities. The first day concludes with the first independent reflection on the part of the students. By choosing, on the basis of their own values and attitudes toward sustainability, a starting triangle, which does not in any way pre-suppose a particular solution, the newly mapped interrelationships built on existing (but previously unfamiliar to most) scientific knowledge allow them for the first time to view from multiple perspectives topics that they would otherwise likely perceive by making use of mental shortcuts. They can present their findings in the form of a public presentation with the help of the mindmaps they created, or in a written form on a publicly available blog.

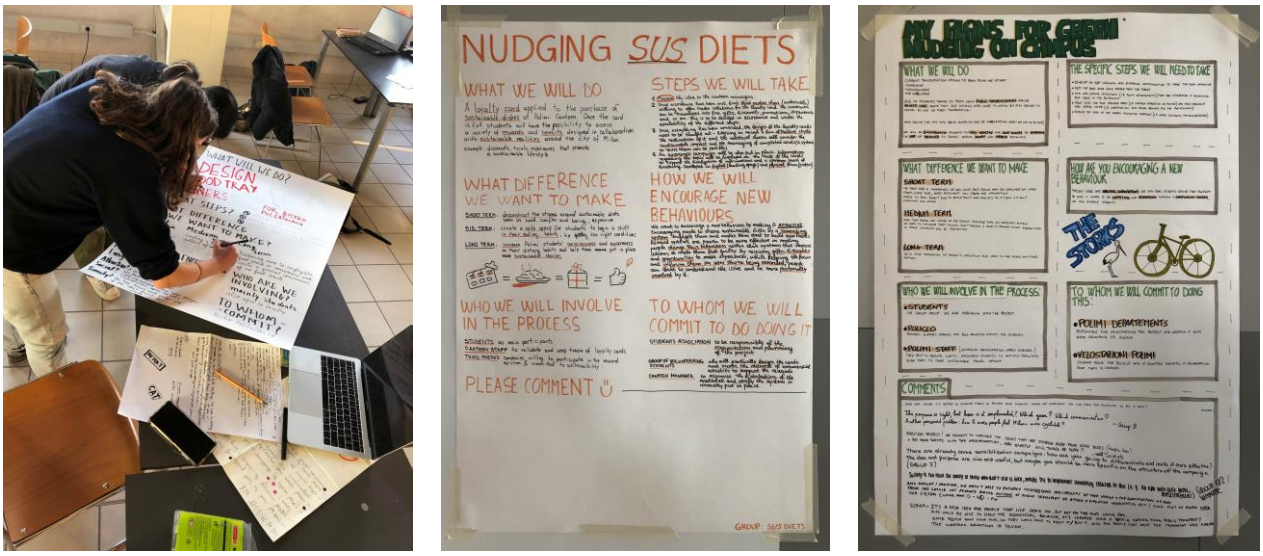
The second day of the workshop is largely dedicated to ethnographic research [31]. The first task of the day is to define potential local sustainability topics, situations, locations and potential problems at the intersection established the day before. After some desk

research on any existing efforts in the areas identified, the students (having been given the tools but not a clearly defined problem) are sent to do field research. In the first phase, they are told to carry out at least two out of three tasks. They can choose from among the following approaches: participant observation, interviews with users, employees, or any other relevant stakeholders in a situational context relevant to the topic and, if possible, acquiring user-generated data, as well as any existing visualizations and other instructions present at the target locations. The students are free to combine and repeat these approaches as they wish. The aim of the exercise is to gather insights in order to achieve an optimal understanding of the actual context, everyday and most likely routine behavior, with an emphasis on identifying unsustainable behavior in the form of reactions, actions, or choices. Even though time is quite limited due to the nature of the workshop, this step, which has students spend most of the second day conducting field research that involves systematic observation of and participation in real-life situations, as well as talking to passers-by, is extremely important. In one case, the students tried to skip this step, relying solely on their past experience. In the very next phase, however, they encountered issues defining the situation that would be subject to redesign. Unable to proceed without the insights gathered in field research, they ended up having to return to the location and carry out the ethnographic research in earnest. After the first interim revision, in the afternoon session of ethnographic research, we further encouraged the students to carry out the first quick tests of the existing green nudges that are expected to work in the chosen situation. The majority sourced existing nudges from *The Little Book of Green Nudges* and tested them within the previously observed context. The intent is to provide some additional impetus toward active participation and critical thinking since they are not emotionally invested in others' proposals. Conducting these preliminary tests also provides them additional experience in how to perform focused observations, while the additional field experience yields an excellent set of further insights into how the individuals under observation respond and adapt to the change. If the situation in question does not permit this step, the students continue with the same approach they used in the morning. The day concludes with an analysis of the insights gathered (an Affinity Diagram [32] can be a helpful tool). The analysis is meant to facilitate a reformulation of the problem identified and highlight opportunities for changing behavior toward greater sustainability.

The third full-day session is devoted to ideation directed toward the workshop's original goal, which is to promote environmentally friendly habits and a sustainable lifestyle. Starting with an analysis of the second day, the students begin the day by synthesizing and choosing a focus (a problem or a situation identified) for their subsequent steps. Since all group members must agree on the choice of focus, the community canvas is often very helpful at this stage. Having identified the values they share on the first day, as well as what they, as a group, will consider success at the end of the workshop, the community canvas can be of great help when selecting a specific opportunity among those identified on the basis of the insights gathered previously. At this stage, a range of design thinking methods come into play. In order to improve the awareness of and positively reframe the problem identified, the students first use the IDEO Design Kit methods "How Might We (HMW)" [33] and "HMW Voting" [34]. Both individual tasks are useful as they offer the opportunity to create an active framework for addressing the perceived challenge before any responses to it are actually designed. After voting and re-prioritizing according to the top-ranked HMW questions, the next task is Crazy Eights, a core Design Sprint method [35]. The aim of this exercise is to push beyond the first idea, which is typically the least inventive. By asking the students to produce eight answers to the same question in eight minutes—a very short time—we make them to think outside the box. The reason this is so important is because the group members can use the proposed methods to view the chosen focus from various perspectives which, in turn, allows them to generate a wide variety of responses to the situation chosen initially. Nicolas Nova condenses the change in perspective into four approaches that occur most often in the process of defining insights into transformed concepts:

> *'Inversion' consists in inverting an observation: a user fear is turned into an interface that is supposed to prevent this fear from happening. 'Translation' relies on the idea that a design concept occurring in one field can be applied to another. With 'Multiplication' moves, the point is to take a certain phenomenon and repeat it or make it less important. By 'Complexification', some designers add or remove steps in a process they observed.* [31] (p. 63)

The afternoon session of the third day is devoted to the development of the green nudge concept selected and its presentation in the form of a poster (Figure 1). The structure of the poster reflects the six questions from *The Little Book of Green Nudges* [4] (p. 47). The students' main task is to develop their concept to a point at which they can describe it in a clear and readable way that can be understood by someone who knows nothing about their research, topic, and task. We can see in Figure 1 that just over half of the poster is devoted to introducing the concept, which is achieved through answering six questions. The rest of the poster is devoted to comments and feedback.




(**a**) (**b**) (**c**)

**Figure 1.** (**a**) Making the presentation poster on day 3; (**b**) the presentation poster ready for feedback; (**c**) completed feedback at the bottom of the poster.

The fourth day opens with a lecture on data visualization and information design in the context of sustainability and green nudge theory [36]. When the aim is to change habits, visualization techniques are supremely important and can be very effective if executed well. The lecture therefore described the field and provided an overview of the possibilities that students can use to improve their concepts. Our aim was to establish to an even greater extent the objective conditions that would, in the next step, allow the students to see their own and their colleagues' posters through the lens of new insights, overcoming, as a result, typical cognitive biases and consequently formulating quality responses. The lecture was therefore immediately followed by a review of the resulting posters. Each group was asked to provide peer feedback for all the other groups' posters. The bottom part of each poster was used to record the comments made. Repeating suggestions previously given by another group was not allowed. The instructions demanded they express their opinion clearly and provide reasoned comments on the research carried out, the suggestions offered, and the way the content was presented. They had eight minutes to read each poster and prepare their feedback. The students were immediately enthused by the task. They were thrilled to have the opportunity to freely provide reasoned feedback on their colleagues' work. This allowed them to further explore and examine their values and attitudes toward sustainability within the group. Many of the groups' comments provided well-reasoned

criticism, with many additional questions asked and ideas for improvements given. This was followed by the iteration of the concepts in response to the feedback received and then by preparation for another round of field tests, which were carried out in the afternoon. The fourth day concluded with the writing of a new blog post that summarized the results of the work of the third and fourth days. This gave the students the opportunity to reflect on the work they had completed and another chance to practice writing for a reader who is initially entirely unfamiliar with their project. It was in the light of this last aspect, i.e., clear language, that we also provided them with feedback on what they had written.

The morning session of the fifth day of the workshop was devoted to finalizing the concepts based on the results of the previous day's testing. This was followed by preparing 10-min public presentations. The presentation had to reflect all five days of work, clearly formulating the problem statements and the evidence-based decisions made during conceptualization, as informed by the insights gathered and the testing conducted. They were also required to include the theoretical background, the principal beneficiaries of the proposed concept, the potential owners of the project (any third parties or institutions that could be involved), and their hopes regarding the project's achievements in the long term. After the presentations, there was a short ceremony wherein the students were awarded certificates of completion. Afterward, they concluded the day and the workshop by writing either a final report or a weekly summary blog post. We found that by having to respond and summarize in various ways, the students developed the skills to communicate using a variety of communication channels.

The structure of the workshop is laid out in Table 1; it is important to note, however, that both the timing and the content of the workshop phases can be adapted according to the desired emphasis and pedagogical objectives. Blog writing can be substituted entirely or combined as appropriate with shorter interim presentations. The latter can be particularly effective when the groups do not all progress at the same pace. Short group presentations can encourage slower groups to be more active when responding, as usually no one wants to be left behind in a public comparison with other groups. The number of consultations during the week may also vary, depending mainly on the desired degree of the educator's influence in the management of the process as compared to the level of autonomous decision making on the part of the students.

### 2.2. Research Strategy Design

This research was based on qualitative data gathering. The workshops carried out formed the basis for validating the effectiveness of the set objectives in the form of a case study [37]. The workshop format was chosen deliberately as it allowed us to thoroughly test what we had set out to achieve within a predefined timeframe and in a predefined context [38]. In other words, the five-day workshop held at selected faculties provided a framework that allowed us to observe students as they collaboratively examined modern environmental issues, gained different perspectives through ethnographic research, learned about the interests of different individuals and groups, and continuously integrated their scientific knowledge with environmental, social, and ultimately ethical considerations in the process of making informed decisions. We identified these insights in the next step using an exploratory approach to the case study. The decision to undertake an exploratory case study was also taken with the aim of gaining key insights for the potential further development and formalization of specialized education in the field of sustainability. At the point at which we were seeking any tangible changes in attitudes and behavior that may have occurred during the workshops, we also complemented the exploratory research with descriptive research [37].

We held the prototype workshops three times with different groups of postgraduate design students, twice at the Politecnico di Milano–School of Design (Visualizing life in the doughnut, February 2022, and How to empower communities to tackle climate change through design, February 2023) and once at the University of Ljubljana, Academy of Fine Arts and Design (How to empower communities to tackle climate change through design,

October 2022). The participants were selected based on the comparability of the study program and the institution they were studying at (similar age, similar programs), but with important differences in order to achieve diversity: the size of the institution and the cultural background from which the students came. Thirty-four students participated in the first workshop, twenty-six in the second, and thirty-four in the third (i.e., the whole sample of our research was 94 participants). In all three workshops, the students worked in groups of 4–6, of which there were seven in the first Milan workshop, five in the Ljubljana workshop, and eight in the last one, again in Milan. In order to establish a constant, we led all three workshops ourselves, while the students changed with each workshop. In Milan, both workshops featured students from the second year of the Master of Science degree DM 270/04 in Communication Design (Design Della Comunicazione). In the Ljubljana workshop, we took the opportunity to weave together different disciplines, as the workshop was attended by second-year masters-level students of graphic design (26.9%), industrial design (26.9%), illustration (23.1%), and photography (15.4%). The last two workshops were also attended by exchange students participating in the Erasmus program (two in Ljubljana; six in Milan), so all three workshops were held in English, following the structure defined and described above.

The data generated during the workshops were collected on a daily basis. In the first workshop, this occurred in the form of presentations which, each time, summarized the steps taken, the insights perceived, and the results, as well as envisaging further steps to follow. In the second workshop, the daily presentations were ultimately complemented by a final report summarizing all the steps taken and featuring a detailed record of all the findings arrived at during the week. In the third workshop, diary entries covering all the steps taken on a particular day, together with the insights, results, and future steps, which took the place of the earlier presentations, were converted into a blog format. In addition to studying the collected materials and the aforementioned participant observations, we also had regular discussions in natural settings during the workshops. All three workshops concluded with either a short individual and anonymous questionnaire based on the KALM Retrospective approach—Keep, Add, Less, More [39]—or with a Mentimeter [40]. The main aim in collecting feedback was to obtain valuable insights for improvement, with the primary focus being on identifying positive emotional experiences connected with participation in a workshop dealing with sustainability in depth.

### *2.3. Data Analysis*

For the data analysis, we began with the traditional Harry F. Wolcott approach [41], as ethnography and case study analysis represent the foundation of his data analysis strategy [42]. The emphasis was therefore on selecting and contextualizing key information, identifying patterns, and presenting findings. It is important to note that throughout the data analysis, the first phase involved "[staying] close to the data as originally recorded" [41] (p. 10). In the next phase, this descriptive approach was substituted with our interpretation of the collated data. To ensure the external validity of the results, we repeated the workshop—the case study—three times, each time with a different group of students. Another factor that importantly contributed to the external validation of the results is that the workshops took place in two separate educational organizations spanning different cultural and social settings.

## 3. Results

The original motive for designing the workshop as a case study was the high level of anxiety, anger, sadness, and powerlessness we noted among students whenever we tackled pressing issues connected to the environmental crisis and climate change in our lectures. The research questions posed, namely: "*Which topics within the field of sustainability and green nudge theory appeal to young people?*" and "*Where are the opportunities to go more in-depth and to empower [young people] in their everyday actions?*" were answered over the course of the first two days of the workshop through a series of short exercises and assignments. As

mentioned previously, the first short task already set the tone of the workshop. Students answered two questions to determine what they would change in society if they had power, and why, and what they are satisfied with and would do anything to preserve. The answers received at each of the workshops were grouped into thematic clusters with similar characteristics (Figures 2 and 3). Figure 4a,b, on the other hand, provides a combined view of selected answers from all three workshops.

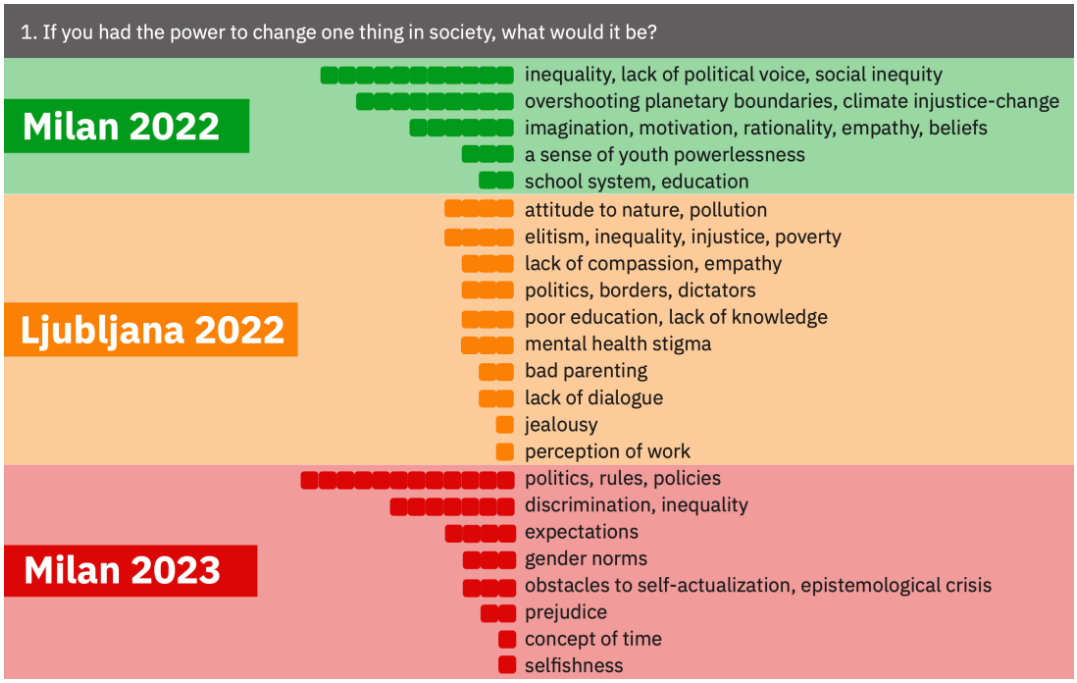
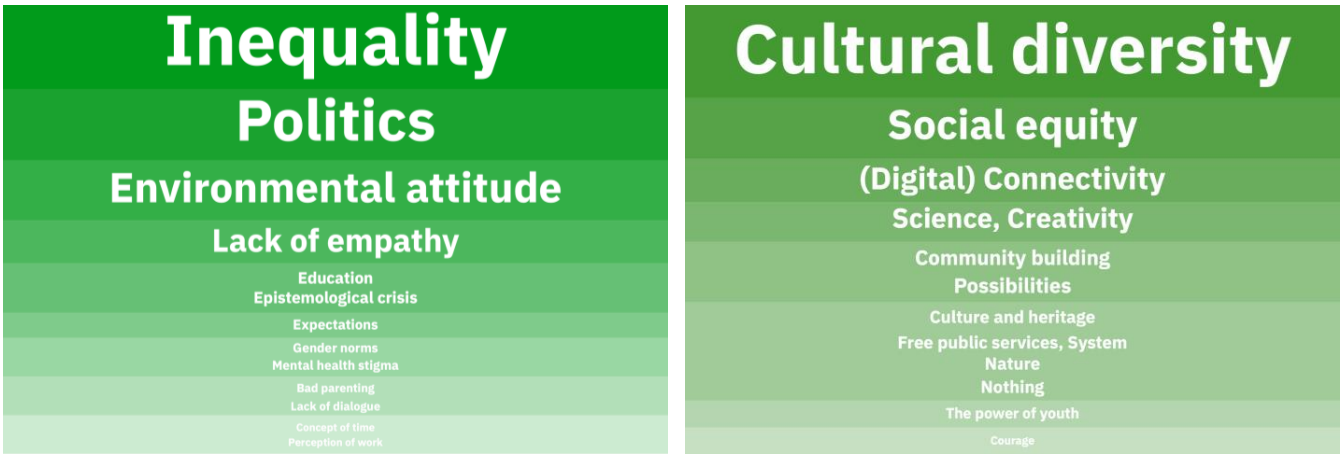



**Figure 2.** The thematic clusters of all three workshops, consisting of answers to the first short question: "If you had the power to change one thing in society, what would it be? And why?" The task was to be completed individually and was anonymous. Students had 15 min to respond.


**Figure 3.** Thematic clusters of all three workshops, consisting of answers to the second question: "What is the one thing in our current society that you are absolutely happy with and wouldn't dream of changing?". They likewise had 15 min for this task, which was individual and anonymous.




(**a**) (**b**)

**Figure 4.** The combined and unified thematic clusters of all three workshops, consisting of answers (**a**) to the first question, detailed in Figure 2; and answers (**b**) to the second question, detailed in Figure 3.

It is particularly telling that in all three workshops, the list of answers regarding what the students wished to change (Figure 4a) is topped by the issue of inequality, which garnered nearly a quarter of the votes (24.7%). This issue encompassed economic and social inequality and gender-based discrimination as well as, ultimately, the lack of a political voice. With this, the students—likely extrapolating from their own position and, at least in the first workshop, still strongly impacted by the pandemic—directly touched on the tenth SDG [1]. Reducing inequalities and ensuring no one is left behind are integral to achieving the Sustainable Development Goals. Kate Raworth similarly identifies addressing inequality as a key step in and a prerequisite to achieving a safe and just space between social and planetary boundaries since, in her view, tackling inequality will force us to rethink the distribution of global resource use in both consumption and production [11].

With inequality topping the list of things that students would immediately change, when asked what is the one thing that needs to be preserved and cultivated, cultural diversity was factor the most voted for (23.5%). The latter is, in a way, the opposite side of the same coin. When proclaiming 21 May as the World Day for Cultural Diversity for Dialogue and Development, the United Nations wrote that "the 17 Sustainable Development Goals can best be achieved by drawing upon the creative potential of the world's diverse cultures and engaging in continuous dialogue to ensure that all members of society benefit from sustainable development" [43]. We are therefore talking about a factor of sustainable development that can improve human well-being; by fostering coexistence in a community and promoting action based on justice and inclusion, it also directly combats inequality. The two answers have another common denominator: they both put us—people—first. The students ranked the issue of our negative attitude toward the environment in third place, with 14.6% of the vote.

Further focused insight into what appeals to students within sustainability was provided by the next task, which involved the selection of three keywords. The in-depth examination and elaboration of their meanings with the help of scientific and scholarly texts pushed them to search for and establish relations and their interrelationships. To investigate how the choice of the three keywords is influenced, the first two workshops featured previously prepared lists of keywords the students were able to choose from. They had the following concepts to choose from (listed alphabetically): behavior, care, circularity, degrowth, distributive design, futuring, invisible women (only at the Ljubljana workshop), regenerative design, social innovation, and survival. In the third workshop, wishing to see how far they would go in their independent choice when exploring new terms, we left the selection of the three keywords entirely up to them. Our only suggestion was that

their selection of keywords be based on the lecture in which the broader context of the research topic in the field of sustainability was established and defined (the lecture was the same in all three workshops) and on the list of scientific and professional texts which, as in the first two workshops, were used to more deeply examine and elaborate on the selected keywords. The three keywords were as follows:

Milan WS1:

- Group 1: circularity, degrowth, and regenerative design;
- Group 2: behavior, futuring, and social innovation;
- Group 3: behavior, degrowth, and futuring;
- Group 4: behavior, distributive design, and social innovation;
- Group 5: circularity, degrowth, and social innovation;
- Group 6: care, circularity, and futuring;
- Group 7: behavior, degrowth, and regenerative design.

Ljubljana WS2:

- Group 1: behavior, care, and social innovation;
- Group 2: distributive design, social innovation, and survival;
- Group 3: care, circularity, and invisible women;
- Group 4: care, social innovation, and survival;
- Group 5: behavior, regenerative design, and survival.

Milan WS3:

- Group 1: agency, behavior, and food (resources);
- Group 2: behavior, degrowth, and water (resources);
- Group 3: education, regenerative design, and tourism (reduce and localize);
- Group 4: behavior, carbon footprint, and energy (resources);
- Group 5: care, engagement, and social innovation;
- Group 6: behavior, education, and recycling;
- Group 7: behavior, degrowth, and waste;
- Group 8: confirmation bias, degrowth, materials (resources).

Below we examine the frequency of the choice of each term. To achieve a more coherent picture, we combined the keywords of the third workshop that were close either in terms of meaning or the topic addressed to our own concepts; we thus folded recycling into circularity, carbon footprint in tourism into degrowth, agency and engagement into futuring, and confirmation bias into behavior. Following the frequently repeated terms from the students during the third workshop, we added the following keywords to the selection: education and resources (while also incorporating waste into the latter). The rationalization described above produced the following results (see Figure 5):

The answer to the question "*Which topics within the field of sustainability and green nudge theory appeal to young people?*" is therefore reflected in the most frequently chosen keywords: behavior, degrowth and social innovation. The choice of the term behavior is partly explained by our choice of initial theories to handle sustainability: nudge theory and the theory of change; the terms degrowth and social innovation, on the other hand, largely represent the students' own choices. It is interesting to note that distributive design [11] (pp. 163–205) is among the overlooked concepts even though it offers the most tangible answers regarding the establishment of processes to reduce inequalities in society. This is likely to be indicative of a broader lack of understanding of a concept that is relatively new and certainly poses a challenge for how to address it in the future. The students instead gravitated toward a more familiar term that they likely perceived as a suitable surrogate, namely *social innovation*, which, according to Ezio Manzini, emerges "from the creative recombination of existing assets (from social capital to historical heritage, from traditional craftsmanship to accessible advanced technology), which aim to achieve socially recognized goals in a new way" [44] (p. 11). Social innovation is, in a way, also linked to degrowth because, as stated by Francois Bonnici, social innovation "supports the shift from growing organizational models to systemic action" [45]. However, when we talk about

degrowth, we are not just talking about cosmetic fixes to the system but about finding tangible alternatives to the existing system, "which pursues growth at all costs, causing human exploitation and environmental destruction" [46].

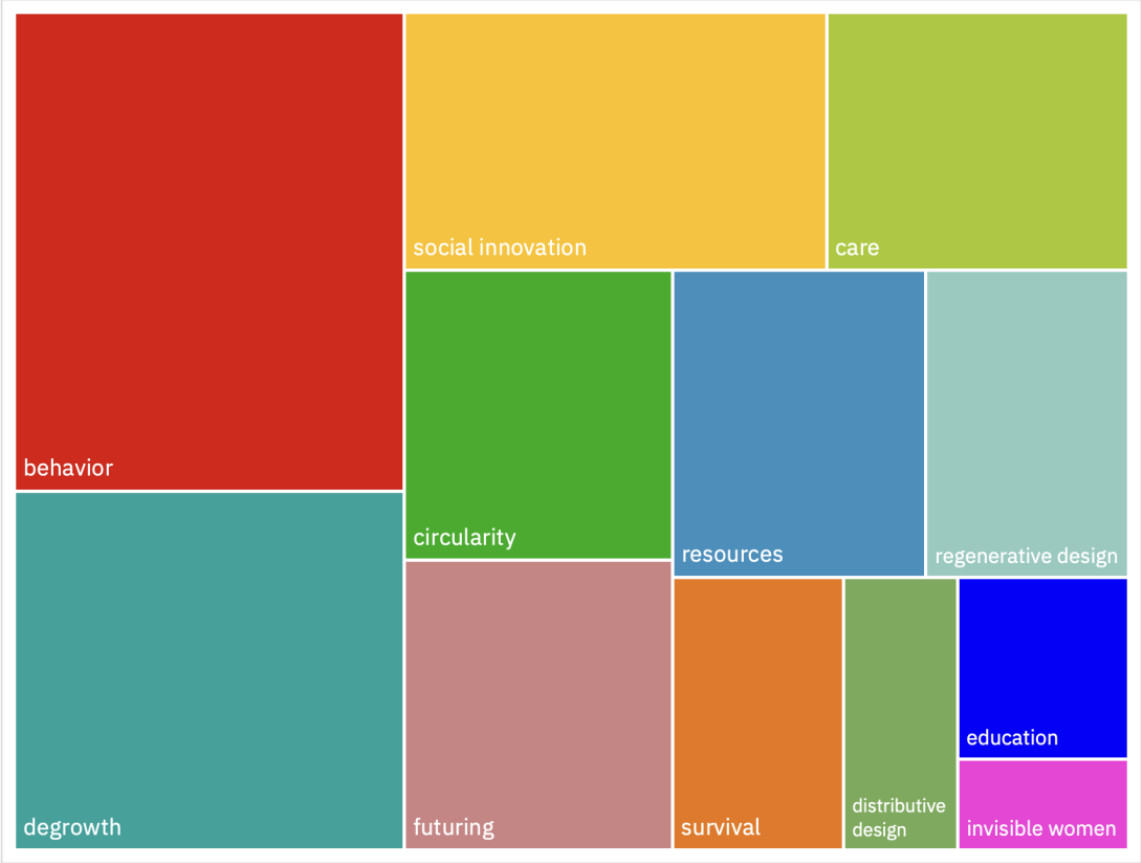



**Figure 5.** An overview of the selection frequency of each concept (all three workshops combined).

Before interpreting the choice of the three keywords with or without a pre-selected set of words, it is useful to look at the results of the next phase. In this phase, building on the established interrelationship between the selected keywords and on the basis of their ethnographic research, the students were asked to identify an intersection of the above and define a narrower field as a basis for the topic that they would focus on until the end of the workshop (Table 2).

**Table 2.** The selection of more specific sustainability topics based on the steps taken on Days 1 and 2.

| Milan WS1 | Ljubljana WS2 | Milan WS3 |
|---|---|---|
| everyday actions | access to education | sustainable diets |
| social provocation as reflection on sustainable action | commons and community spaces | water conservation |
| combating biodiversity loss due to consumerism | women's image and position in society | sustainable mobility |
| ethical and responsible use of local resources | social isolation | energy conservation |
| sustainable communications | environmental legislation | engaged community |
| engaged community | | recycling of waste |
| finding links between the needs of the individual and the collective | | food waste |
| | | reduced material consumption |

As is evident from the sequence of the selection of the three keywords and the subsequent steps, a pre-selected list of keywords provides a better starting point, yielding choices that are more varied and less impulsive. A pre-defined, carefully selected set of keywords is in fact a nudge through which a choice environment is established that pushes students to depart from their everyday understanding of sustainability. As the third workshop clearly shows, when students are not thus encouraged to explore new terms, their understanding of sustainability remains largely constrained to conventional areas: recycling, waste management, and searching for ways to reduce the use of natural resources. While these are all no doubt important topics, the selection also indicates the narrowness of the initial view of the topics that students spontaneously associate with sustainability. It also shows that the thematic lecture is not sufficiently impactful to spur students to seek out additional knowledge in the scope of the newly introduced topics. Moreover, this change in how keywords are chosen has clearly demonstrated that if the choice is left open-ended, the students immediately begin narrowing down their thinking toward specific topics of research, thus prematurely preparing the ground for the next steps. This indicates a somewhat more pragmatic approach—a mental shortcut—which, however, limited from the very outset both the field of research and the potential for gaining new knowledge and new insights into what action in the field of sustainability is possible. The selection of the nine keywords by the educator can, from the outset, be considered a biased choice as well. However, as explained at the beginning of this text, the main purpose was to open new perspectives and approaches to sustainability. The aim was to explore novel possibilities for stimulating students' interest in actively engaging in behavioral change toward sustainability.

Despite this moderate cognitive bias in the second step of the third workshop, the clearly structured concept allowed us in all three workshops to engage students in real-world problems, encouraging them to analytically engage with existing scientific information, carry out ethnographic research, and conduct actual field tests, all with the aim of gathering key insights (including in the field of ethical and social values). By insisting on field research, we directly (and spontaneously) encouraged them to explore behavior and sustainable practice in a local environment. As soon as the community canvas was completed, the group had the opportunity throughout the workshop "to learn negotiation, problem-solving and decision-making skills through discussions about ecological, social, economic and ethical principles concerning local and global responsibility in their own lives" [14] (p. 2).

Below (in Table 3), based on the data obtained, we evaluated the resulting student concepts (20) using the following three factors:

- Factor 1: We examined the primary lens through which the students viewed the field of sustainability: environmental or social aspects. Of particular interest to us was which aspect predominated in cases in which there was a change in behavior based on the proposed concept.
- Factor 2: In the context of the seventeen SDGs, we were interested in which of the five core areas (the so-called five Ps), people, planet, prosperity, peace and partnership [47], is (or are) dominant both in the students' understanding of sustainability and in their choice of focus (the problem identified during field research) and the final design of the concept.
- Factor 3: Finally, in pursuit of the Education for Sustainable Development (ESD) parameters, we examined which aspect of sustainability is predominant: the anthropocentric approach (Human-Centered Design) or a planet-centric future (Environment-Centered Design). In the lecture, we highlighted the need to start perceiving non-human actants as valid stakeholders of our practice.

**Table 3.** The resulting student concepts were evaluated using three factors.

| Student Concepts | Environmental or/ and Social Aspects | Five Ps of the SDGs | ESD Approach and Potential |
|---|---|---|---|
| De Guide–small measures for big changes (a monthly guide in the form of an interactive tool for sustainable action) | environmental and social aspects | people, prosperity | anthropocentric approach |
| A Looming Reality Polimi * 2050 (using a speculative design approach to visualize the future through augmented reality, they set out to break the mold through social provocation to trigger reflection in the user) | social aspects | people, prosperity | anthropocentric approach |
| Meat the Revolution (an initiative for a movement that would fight for animal rights and against mass factory farming by exposing shocking information about the actual conditions in animal agriculture) | environmental aspects | people, planet | planet-centric future |
| ECOFFEE: Start to Drink Differently (promoting a change in coffee consumption habits by building on knowledge of the carbon footprint and the environmental impact of vending machine coffee) | environmental aspects | planet | anthropocentric approach |
| Think Before You Send: Digital Impact Awareness (raise awareness and encourage a better behavior on the impact of digital activity) | environmental aspects | planet, prosperity | anthropocentric approach |
| Zero Festival (a festival organized by students with the aim of bringing people together around sustainability issues in a fun and interactive way) | social aspects | partnership | anthropocentric approach |
| We Must be the Voice of Science (a subject that will equip students with knowledge of and skills in using analytical tools for the purpose of communicating all systemic and process-based sustainability activities) | environmental and social aspects | prosperity | anthropocentric approach |
| Funding for Student Projects: How to Reduce Financial Burden During Studies at the Academy of Fine Arts and Design (fighting poverty and inequality) | social aspects | people | anthropocentric approach |
| Cohabitation (finding a way to overcome the lack of community spaces facilitating interdisciplinary collaboration) | social aspects | prosperity | anthropocentric approach |
| Illuminate (fighting harassment and violence against women with light) | social aspects | people, prosperity | anthropocentric approach |
| The Bridge (homelessness is one of the most extreme forms of exclusion from society—finding ways to bridge/overcome) | social aspects | people | anthropocentric approach |
| Eco Jail (the legislative authority has the power to change our unsustainable habits by changing legislation to force those who refuse to change through civil society incentives) | environmental and social aspects | planet, prosperity | anthropocentric approach |
| BITEWISE (designing a service that will encourage PoliMi students to make a conscious change toward sustainable eating) | environmental aspects | people | anthropocentric approach |
| One Liter is Enough: Water you doing? (fighting water waste on campus) | environmental aspects | people | anthropocentric approach |
| Ride the Change (How can we mediate personal necessities and environmental needs?) | environmental aspects | planet, prosperity | anthropocentric approach |

**Table 3.** *Cont.*

| Student Concepts | Environmental or/ and Social Aspects | Five Ps of the SDGs | ESD Approach and Potential |
|---|---|---|---|
| SKIP THE STEP IF (seeking to create a fun and engaging way to encourage students to choose the stairs over the elevator and make more sustainable choices in their daily lives) | environmental aspects | planet | anthropocentric approach |
| Give Life to the Community: Encouraging Engagement–From an Aloof Code of Ethics to a Participative One | social aspects | people, prosperity | anthropocentric approach |
| ReCraft (designing a new recycling approach at PoliMi) | environmental aspects | planet | anthropocentric approach |
| Pitching the Change (How might we prevent the discussion on food waste from being boring?) | environmental aspects | planet | anthropocentric approach |
| Bring Your Cup, Do Your Part! (reducing the consumption of disposable cups) | environmental aspects | planet | anthropocentric approach |

* abbreviation for Politecnico di Milano.

The results showed that students prioritized environmental aspects (10) over social aspects (7) when addressing sustainability, with three equally combining both aspects. It was interesting to note that in the first workshop in Milan, both aspects were treated almost equally; in the Ljubljana workshop, students gave priority to the social aspects; and in the third Milan workshop, the environmental aspects were dominant. The fact that both aspects were incorporated is undoubtedly due to a new understanding of the Doughnut Model by Kate Raworth (which makes the pursuit of environmentally safe and socially just space a prerequisite for achieving sustainability) [11], which the participants had the opportunity to learn about both at the introductory lectures and through the selected readings. A review of the five core areas of the 17th SDG shows the predominance of three areas: people, planet, prosperity, which should be read together with factor 3. Here, despite the emphasis established initially, the anthropocentric approach is still completely dominant. Of the twenty concepts, there is only one that does not prioritize people. This also means that when the goal chosen from among the five Ps belongs to the "Planet" aspect, it is understood and considered through the perspective of a person who, in their daily activities, must seek ways to achieve better harmony with natural resources. Here, we identified significant potential that needs to be systematically leveraged in the next phases. We must create nudges along the way that will enable students to move away from a purely anthropocentric approach, in a knowledge-based way, and toward the equal treatment of all other non-human actants.

Further insights regarding potential improvements to the workshop (Table 4), as well as regarding the positive emotional experience of participating in the workshop, were provided by the spontaneous reactions of the students (sent by e-mail after the workshop), excerpts from the final reports, and an individual and anonymous questionnaire conducted using the Mentimeter tool (Milan) or the KALM retrospective format (Ljubljana). Gathering insights helped us take a closer look at the original motive for the design of the workshops, namely, finding a way to make students aware of the urgency of addressing climate change while overcoming the feeling of powerlessness. It is also important for the further development and improvement of the workshops.

Similarly positive to the feedback gathered in Table 4 above was the response indicated via the KALM retrospective. On the basis of all the responses received (26 students participated), we formed thematic groups, interpreting them as positive or negative depending on the nature of the response. Figure 6 shows the three most frequent responses, that is, the topics that resonated with the students the most and were mentioned most often. They were extremely positive about the teaching experience in the form of a workshop, i.e., the

pedagogical approach. There were 21 positive opinions praising the scheduling/time structure and organization of the workshop, the quality of the lectures, the choice of working methods and approaches, as well as the "enthusiasm of the tutors", the "positive vibe" and the "atmosphere of the workshop". Opinions were mostly negative (with four positive and seven negative opinions) about the technical aspects of the workshop environment they worked in (with most criticism directed at the MS Teams application through which they received the assignments). There were individual negative opinions related to the instructions for the assignments and the report they were required to write at the end of the workshop. The response to the (interdisciplinary) teamwork, however, was exceptionally positive. No fewer than 23 students expressed an opinion on group collaboration (with 20 positive and 3 negative responses), highlighting the discussions generated through teamwork and the solid networking opportunities. They also expressed a desire for more cooperation among different departments and faculties, as well as external stakeholders.

**Table 4.** A selection of students' responses.

| Participant | Responses |
|---|---|
| PCP 1 | Thank you for the great opportunity and experience! |
| PCP 2 | As a direct result of the intensive workshop, we have learned how to approach a problem in-depth and start dealing with it step-by-step, in order to achieve efficient results. We got to know different approaches and methods which can be beneficial in the future when teamwork will be needed for design solutions. |
| PCP 3 | Thank you once more for this stimulating workshop week, I hope we can stay in contact in the future for any possible collaborations. |
| PCP 4 | We feel very positively uplifted by the feedback we've gotten from the different potential actors in this process, and different service providers, which leads us to believe, that this project could actually become something real and tangible. |
| PCP 5 | This week was a real breaking point–until now, when something happened, we laughed it off and continued our daily lives as if nothing ever happened. It is okay to put your past behind you and live your life to the fullest, but because these problems keeps on repeating themselves, we must stop for a second and do something about it. |
| PCP 6 | Thank you so much for this creatively stimulating week (and for the chocolate)! It was truly a pleasure being a part of your workshop! |

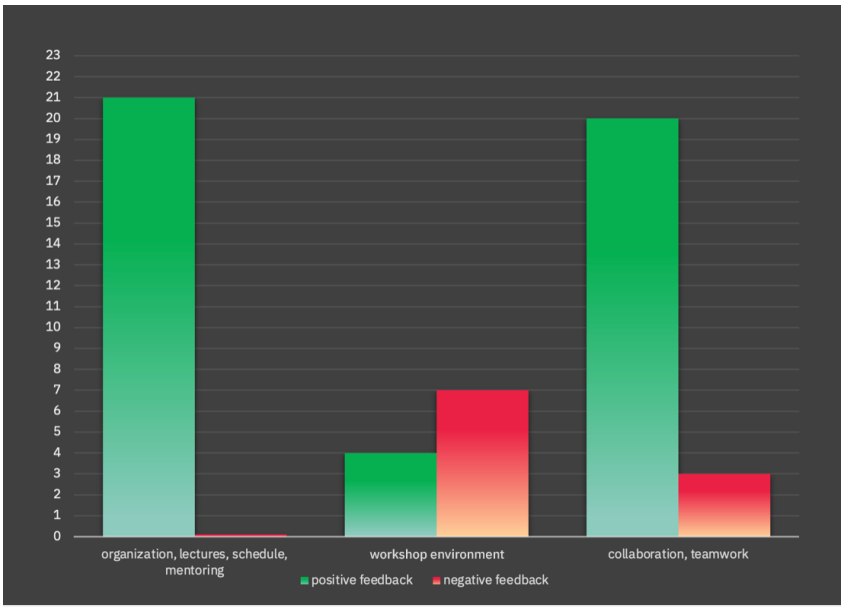



**Figure 6.** The three most frequent themes in the students' responses to the Ljubljana workshop.

## 4. Discussion

At its core, our research was greatly influenced by the following underlying epistemological position: how we know what we know [37], or, as elaborated on by Abercrombie et al., a theory of knowledge that is based on how knowledge of the external world is acquired [48]. The pedagogical decision to develop workshops for different groups of European students addressing a complex field like sustainability was driven not only by the awareness of the urgent need for action regarding climate change but also by our previous lack of success using conventional (not student-centered) approaches to learning. Based on personal observation and experience, as well as scientific research [9] indicating that students experience anxiety as well as apathy and inertia when dealing with complex, sustainability-oriented topics, we decided to develop a different approach. An approach which, among other things, seeks to provide additional encouragement to learn from the external world, while actively responding to the goals of the European Climate Pact objectives: raise awareness of climate issues and EU actions; encourage climate action and catalyze engagement; and connect citizens and organizations that act on climate and help them to learn from each other [49].

Students were not the only focus of our research; we also sought to explore pedagogical capacities in the field of Education for Sustainable Development. Previous studies have shown that engaging students to directly explore real-world problems while simultaneously striving to understand their contexts is an important part of active knowledge transfer. In this process, a lack of capacity and skills on the part of educators is an often-encountered barrier to achieving the goals of ESD [20,50]. The workshop that was developed over the course of the research and tested in a real-life setting proved to be a well-conceived framework that allows educators to competently navigate through complex, sustainability-oriented content. In other words, the workshop builds on pedagogical design capacity in practice and allows educators to further develop (during the workshop itself) their skills in pedagogical design capacity for ESD. This is further facilitated by the structure of the workshop itself, which encourages teachers to accept their role in the workshop as co-designers.

A strong practical confirmation of the latter in our case was our experience of pedagogical work in two different institutions in two European countries. This shows, among other things, the necessity of having a framework that allows for flexibility in the pedagogical approach since knowledge of both the content and the pedagogical approaches that students develop in other classes during their studies in the different study programs varies considerably, which can have an impact on implementation and the final outcome. The one-week workshops revealed differences in the research literacy of the students and their sensitivity to different topics they had (or had not) already covered during their studies, as well as their attitudes toward both independent project work and teamwork. In light of the above, we, as educators, needed to be able to quickly understand the existing situation and make sensible adjustments to integrate existing circumstances in order to create the desired learning contexts. The workshop framework as designed facilitated these adaptations without limiting the students' creative potential. On the contrary, the given framework proved to be an excellent testing ground for mutual development and, additionally, our observation and analysis of the results. For the latter, we followed John W. Creswell's thesis that it is impossible to completely escape the influence of social and historical perspective but that also people construct meanings when actively engaging with the world [51].

The results presented show that the framework designed offers tangible and promising insights. At the same time, they point to the possibility of further deepening the delivery of content, not only through interdisciplinary cooperation among students from different fields but also on the part of educators. By integrating different perspectives on a common sustainability starting point, this research could be a foundation for the further development and long-term formalization of a specialized and certified lifelong education in sustainability primarily based on nudge theory.

## 5. Limitations

As a case study, the research was limited to a workshop concept that was repeated three times within the framework of the postgraduate design studies at the Politecnico di Milano, School of Design, and the University of Ljubljana, Academy of Fine Arts and Design. To further enrich the study, it would be valuable to explore avenues for integrating additional activities for qualitative data collection. However, this would necessitate the inclusion of more educators or researchers within the team, especially for activities like participant observation. Another potential enhancement to the research methodology could involve establishing more robust and possibly pre-arranged opportunities for students to engage directly with stakeholders during their fieldwork research. It is important to acknowledge that this could potentially limit their autonomy in choosing topics and areas of focus.

## 6. Conclusions

The results of this study show that an intensive five-day workshop was a sensible and effective choice. It was repeatable throughout various social and cultural milieus and consequently offered a degree of adaptability without actually departing from the fundamental concept as the workshop structure, as set up, allows for the comparability of the data collected at all key phases. This makes us optimistic that our concept (both in terms of structure and the tools and processes chosen), with suitably adapted content, can be replicated in other (inter)disciplinary areas of education, especially when we want to stimulate the students' interest in sustainable action and different sustainability-oriented behaviors. Our research also shows that the workshop enables educators to respond to emerging global issues such as climate change while overcoming students' feelings of powerlessness. Moreover, students can be equipped with new knowledge in the process, and their interest in collective and sustainability-oriented problem-solving in their own environment can be stimulated.

**Author Contributions:** Conceptualization, B.P. and P.Č.O.; methodology, B.P.; validation, P.Č.O., formal analysis, P.Č.O. and B.P.; data curation, P.Č.O.; writing—original draft preparation (first author), B.P.; writing—review and editing, B.P. and P.Č.O.; visualization, P.Č.O.; supervision (lead author), P.Č.O.; project administration, P.Č.O.; funding acquisition, B.P. and P.Č.O. All authors have read and agreed to the published version of the manuscript.

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**Institutional Review Board Statement:** The study was conducted in accordance with the Guidelines for Ethical Conduct in Human Research by the University of Ljubljana.

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data presented in this study are available upon request from the authors.

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