Design and Technology Education: An International Journal

26.3

The Impact Plan: anticipating the impact of university students' final projects

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Abstract

University students often struggle with choosing a topic for their final projects due to the lack of a supporting and defining framework for said selection. Should the student be oriented toward reflecting on how each of the possible topics to choose from can become an impactful project in the short, mid and long run, maybe that selection becomes a less anxious moment and the engagement with the project activities more relevant and meaningful to the student, being particularly pertinent when students can anticipate different levels of impact that range from their own life to a wider community.

In this paper a visual tool is proposed, aiming at simplifying the moment of choosing a project by matching its anticipated impact with the users' motivations, capacities, ambitions, and perceptions of value. A prototype was designed and tested with a group of students enrolled at a creative postgraduate course, in a professionalisation-led module, under the UK's first 2020 lockdown restrictions. The tool proved helpful in supporting the students' decision making when having to select a topic to be developed in the context of a communication design project, and to which they were able to align their personal interests, their career ambitions, and the way they perceived themselves as contributing to a better world. Since this is a cyclical experience, both during a design learning environment, but also in design practice, the Impact Plan, which was conceived with design students in mind, configures as fully replicable in other academic (and professional) contexts too.

Keywords

Design Thinking, Impact Assessment, Purpose, Project Selection, Speculation, Post-pandemic.

Introduction

Whilst academic achievement is still understood as a significant metric for employability, students increasingly see the need to add value to such achievements, to gain an advantage in the job market (Berger & Wild, 2017). At a time when they face the threats brought by the predicted high levels of automation, and now the impact of the COVID-19, those graduating amid the pandemic face the enduring and still unknown implications of this enormous split the world is experiencing – and that will shape their understanding of society as a functional system. In normal circumstances, there is always a great deal of uncertainty when entering the workforce after graduation; for those graduating soon or in the next couple of years, that uncertainty goes beyond the short-term issue of finding their first job, because nobody knows what the (job) market will look like post-pandemic. It is, maybe, the right moment to reassess priorities and the perceived notion of value.

This research intended outcome is an impact-led tool to connect students' reflective practice with their pre-professional identity, aiming at anticipating (and speculating on) the short,

medium, and long-term outcomes their projects will have in their lives and the lives of others. It aims at providing students in final years of both undergraduate and postgraduate studies with a design thinking structure for reflecting, planning, and prioritising their experiences for heightened employability, guiding them through the essential contexts in which their final projects can trigger or build on some impact.

The world needs design (thinking) more than ever

According to Watts (2006), paying more attention to students' employability responds to their principal motivations for enrolling on Higher Education (HE) courses. The latter are described by Smith (2016) and Leman (2018) as leading individuals to enhancing achievements at work, progressing in the current career path, gaining access to better employment, and developing talent and creativity. These motivations are, supposedly, instructed by a pre-professional identity which entails a self-understanding of the skills, qualities, culture, and ideology of a student's intended job (Jackson, 2016).

Personal Development Planning (PDP) is defined as "a structured and supported process undertaken by a learner to reflect upon their own learning, performance and/or achievement and to plan for their personal, educational and career development" (QAA, 2009 p.2), emphasising the student's agency and ownership. Constructivist theories of reflexive identity formation defend that reflexivity is deeply associated with a constant need for reinventing the self (Giddens, 1991; Beck, 1992). And although PDP can be approached within a learning frame, the latter theories have been having an increased influence in the field of career development by "encouraging people to identify constructs and themes within their career narratives and to use these as a basis for future action" (Ward & Watts, 2009, p. 9). It should be noted that reflexivity differs from reflection: according to Rennie (1992), reflection involves self-awareness, while reflexivity involves reflection plus agency within such self-awareness. Thus, as suggested by Savickas (2016, p. 84), "reflexivity fosters a self-awareness that flows into intention", being powered by motivation.

According to Kieslinger et al. (2009), motivation is one of the key factors for successful adult involvement in learning and knowledge sharing activities. Duckworth, Peterson, Matthews and Kelly (2007) performed a study on grit, which is defined as perseverance and passion for long-term goals, suggesting that the achievement of complex objectives associated with intricate problems entails not only talent, but also its application over time and in a sustained and focused manner. Solution-oriented behaviours are extensively explored in the context of Design Thinking (DT) and, lately, by the educational community in general. Being DT a human-centred process, it delves into the development of active listening, agile thinking, and forecasting, in a continuous fail-and-learn-fast style (Curedale, 2013). The opportunity to address and solve complex dilemmas that arise in real-life problems helps students develop contextual knowledge and content, as well as reasoning, communication, and self-assessment skills. Thus, such a practical approach sustains the students' levels of interest and motivation because they easily understand the transferability of these skills into real situations they may encounter in their future. It should also prepare them for pivoting, iterating, adopting improvisational approaches, and thinking in a "How Might We" kind of way. How-Might-We (HMW) statements work as prompts heavily relying on abductive logic (Dunne & Martin, 2006; Dorst, 2011). According to Gottlieb et al. (2017):

> *The "how" assumes that there is a solution. "Might" assures it is acceptable whether an idea works or not. "We" emphasizes collaboration. The prompt works as a source of inspiration for idea generation that broadens perspectives, discovers connections, and generates unexpected ideas (p. 23).*

LaRossa (2020) tells us how Milton Glaser used to ask his design students to write a detailed place description of their perfect day at work five years in the future. The author also explains that "imagining the future in detail is about designing a destination – a vision to hold on to when things aren't going as planned. This same mentality helped me stay focused on my career goals".

A tool that provides students with guidance towards self-awareness and the subsequent construction of career intentions may well be a way to help them build their agency and authority in finding meaningful solutions for real-world problems (even if future ones) of their concern. When Design is a field inherently interdisciplinary, often focused on anticipating a future that does not yet exist and on solving complex problems for multiple stakeholders (Tharp & Tharp, 2018), such a tool would set the ground for speculation of impact. Students need the experiential and reflexivity-led tools that allow them to develop and prepare as humanity-centred individuals, looking into the broader landscape with a sustainability lens and transformational attitude, developing greater awareness concerning the contexts we live in and, from there, adjust their career ambitions and find their place in a vertiginously changing world.

Although several visual tools (e.g. customer journey maps, question ladder, business model canvas, personas, etc.) have been created and developed in the last few years to support innovation and design thinking (Lundmark, Nickerson & Derrick, 2017), none have been identified in establishing the link between reflexivity and speculation at the different stages of possible impact. Currently, many students increasingly question their career prospects and, more than ever, both academia and industry are being asked for clear contributions to the wicked problems that society faces. It seems relevant to systematically enhance the notion of impact, guiding students through the selection of projects (namely when they need to choose one from a pool of many, either proposed by teachers or self-negotiated) that best align to both their existing and desired skillset, and their ambition towards making an impactful addition to the world.

Hence, the question guiding this project is: How can students anticipate the impact of their projects?

The Method and empirical process

This project is qualitative in nature and uses hermeneutics of action as the supporting framework for interpretation (Giddens, 1993). It is part of an ongoing larger research that follows a constructivist grounded theory approach (Strauss & Corbin, 1994).

Benchmark of existing tools

According to Gilje (2020), central to hermeneutics of action is that what actors do must be contextualised in order to understand the intention behind the action (in this case, the most well-known and conscious action has to do with completing a university degree). Hence, the research started with a benchmarking exercise on existing employability-led tools and canvas-

based activities to support design and innovation, decision-making, speculation, and impact-centred thinking. A total of 312 canvases, boards, diagrams and other generative activities were collected from seven different sources and retrieved from either agencies/practitioners' online resources (official websites, blogs, wikis), monographies and scientifically developed resources. The analysis developed from a collection of 35 tools selected based on the presence of elements that would frame their use under design and innovation, decision-making, speculation and impact-centred thinking. A framework of analysis was purposefully created to guide the scrutiny of the selected generative tools (Lelis, 2021).

Defining principles and value moments

Abductive reasoning would have to be the thinking mode orienting the use of the desired tool. Dorst (2011) explains abduction as a process of reasoning that can be broken down into two forms, being one of them the case in which both the HOW and the WHAT attached to a problem are unknown: only the value/purpose, represented by the outcomes and the impact that one wants to achieve is clear. Hence, two design principles were considered to answer the research question:

- Principle 1 – To the student, the Value (WHY) is the best-known variable. Hence, it needs to be represented to the best extent to, subsequently, inform both the HOW and the WHAT (Figure 1).

Figure 1. Representation of Principle 1.

- Principle 2 – The Value describes the purpose (the intended impact), informs the rationale for taking up the project/activity, and must be at the centre of the student's speculative process (Figure 2).

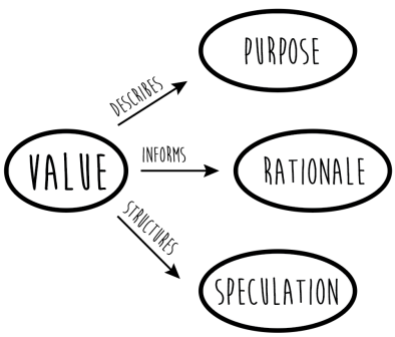

Figure 2. Representation of Principle 2.

Value has been divided into three moments: 1) Self & instant reward, 2) Independence outcome, and 3) Humanity-centred impact. These are linked to different sorts of outcomes throughout time (short, medium and long-term), informed by both the most common values to human nature (Schwartz, 2006), the requirements of societal and professional functioning (Persson et al., 2001) and the theory of human motivation (Maslow, 1943):

- *Self- and instant reward.* This value moment focuses on immediate rewards (short-term outcomes) inherent in the experience of performing certain activities or engaging with a specific project. According to Persson et al. (2001), enjoyment is an essential characteristic of this dimension and, in some cases, individuals can enter a state of flow (Csikszentmihalyi, 1990) when the activity provides an intense challenge while matching their skills. In this case, the student chooses certain aspects regarding the completion of a selected project because he or she enjoys them. The impact of engaging with the activity/project will be mainly on the Self as it would relate to the students' academic achievements, where belonging to a course and engaging with its domain of activity plays a vital role in the student's motivations. That corresponds to an impact stage categorised as Studies (Figure 3).

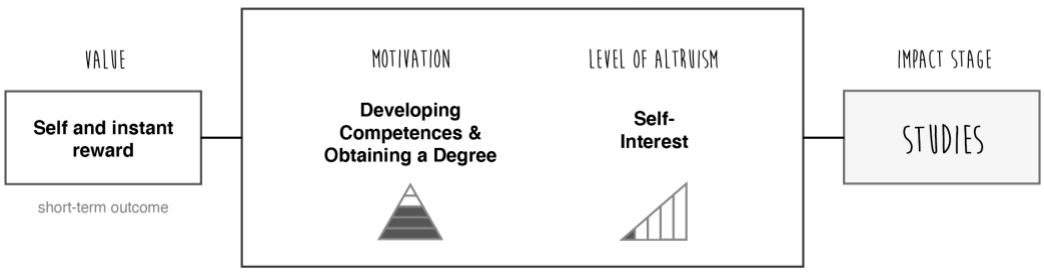

Figure 3. Value moment "Self and Instant Reward".

- *Independence outcome.* This value moment is about the student's career intentions. It is characterised by a medium-term looking ahead: the student is asked to anticipate the impact that the activity/project may have on improving or acquiring capacities/skills they will need to follow a specific career path. Such reflexive exercise will allow students to become aware of their future situation and needs, possibly nudging themselves towards understanding their interests, preferences, passions and, simultaneously, the issues they face and that they would like to solve. This level of impact would relate to the students' careers and professional ambitions and is driven by motivational grounds related to achieving esteem and expertise recognition, at a level of altruism where cooperating and responding to cooperation are deeply connected to "acting in a way readily grasped by others" (Zwick & Fletcher, 2011, p. 4). This moment corresponds to an impact stage classified as Career (Figure 4).

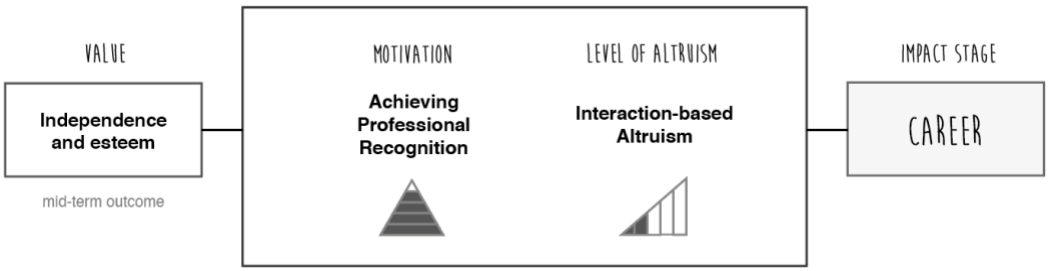

Figure 4. Value moment "Independence and Esteem".

Humanity-centred impact. This long-term outcome is grounded on Universalism values that contribute to positive social relations. It is driven by the others and by the planet, with sustainability at its core. The student will, this way, realise that his/her performance and engagement with the project will potentially lead to a concrete solution that is of value not just to them but also to a larger number of individuals, ranging from local communities or industry sectors to international causes. Hence, this would be inspired by higher-level altruistic motivations related to achieving a solution to a wider problem and possibly leading to a sense of fulfilment. Sustainability was broken down into its three dimensions as defined by the United Nations 2030 Agenda – Economic, Social and Environmental – used as the impact sub-stages defining the third value moment (Figure 5).

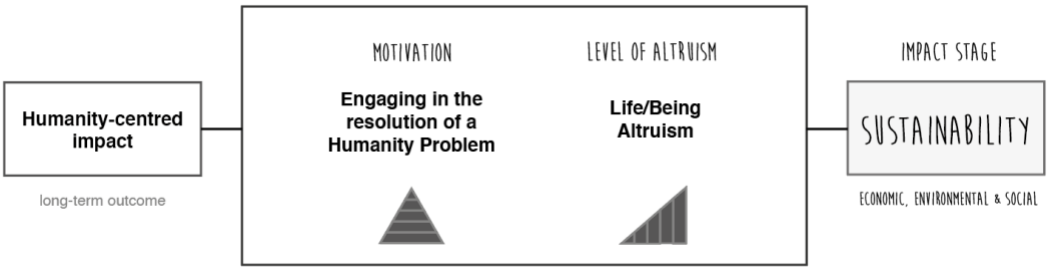

Figure 5. Value moment "Humanity-Centred Impact".

The development of the Impact Plan prototype

The previous stages led to prototyping a tool that would help answer the research question. The Impact Plan was designed as:

1. a printable Canvas for students to map their notions of Value (Figure 6), which is accompanied by:
2. a deck of Outcome Cards (Figure 7) grouped into the five categories identified under the three Impact Stages – Studies and Career, both with two areas of impact (Development and Wellbeing) for the anticipation of "Impact on Me", and Sustainability's three dimensions: Economic, Environmental and Social, for the foretelling of "Impact on Humanity" (Table 1).

On one of its sides, the cards include several prompts for outcome speculation and rationale-led narratives to emerge. They allow students to assess the impact they anticipate for each project/activity under consideration, using a scale ranging from -2 (for negative impact) to +2 (for positive impact). On the other side of the card, the student can write down the result achieved by adding the scores of all prompts from that card. The canvas would be used to

gather the relevant cards under each impact stage and to register the quantitative final scores that would be the sum of the results from the cards used to assess each topic or project under consideration. It would also allow students to note down the impact prompts they positively assessed in the cards to draw and visualise the possible interconnections between the three stages of impact.

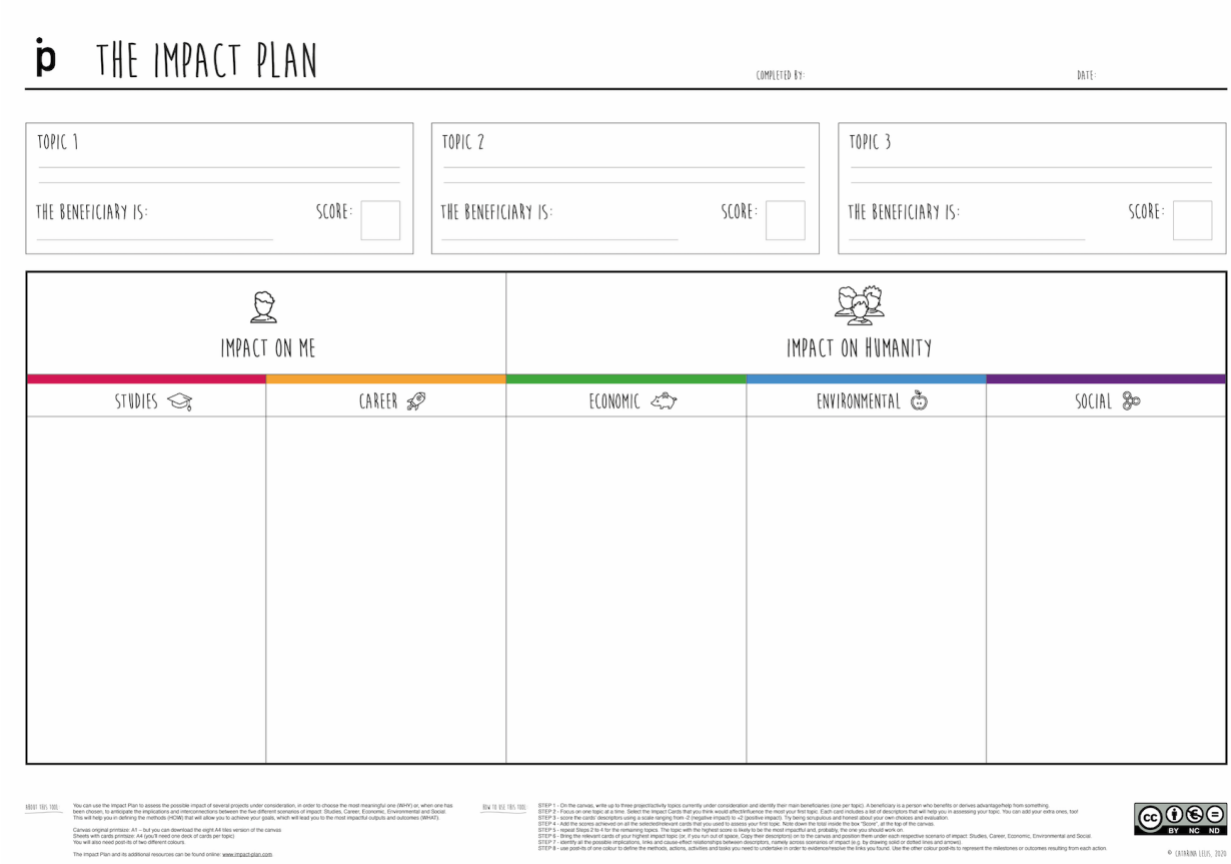

Figure 6. The Impact Plan canvas

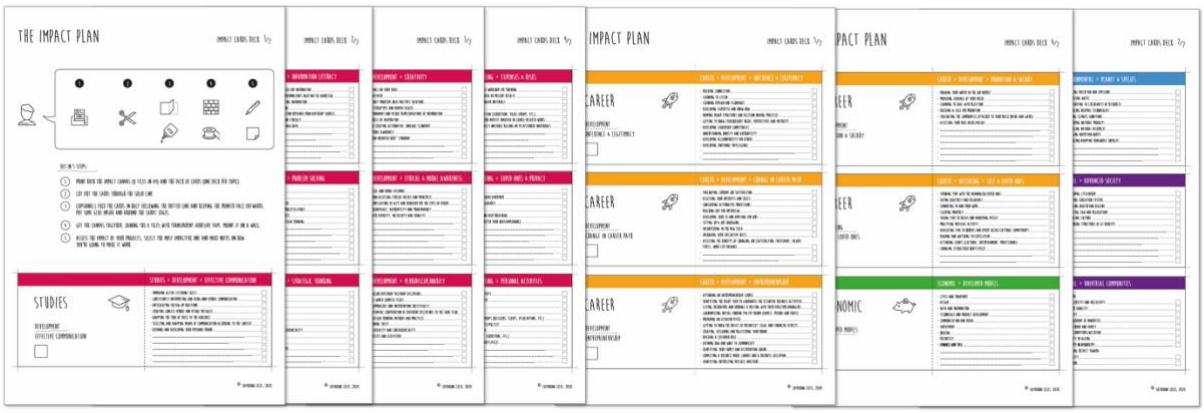

Figure 7. The deck of Outcome Cards

Table 1. The five Impact Stages used to categorise and organise the Outcome Cards

Impact on…	Impact Stage	Areas of Impact	Outcome Card
Me	Studies	Development	Effective Communication Information Literacy Problem Solving Strategic Thinking Creativity Ethical & Moral Awareness Pluridisciplinarity
		Wellbeing	Expenses & Risks Loved Ones & Privacy Personal Activities
	Career	Development	Influence & Legitimacy Change in Career Path Entrepreneurship Promotion & Salary
		Wellbeing	Self & Loved Ones
Humanity	Sustainability: Economic		Developed Models
	Sustainability: Environmental		Planet & Species
	Sustainability: Social		Advanced Society
			Universal Communities

There is no specific order on how the canvas and cards ought to be used. Ultimately, these are meant to be scoring devices to, firstly, back up the student in choosing the most impactful and personally relevant project/activity. For that, he/she will have to engage in an informal speculative exercise about future scenarios in which: 1) users would be involved given the particularities of each project, 2) projects would have implications on their lives and, 3) ultimately, in the lives of many other.

Implementing and testing the Impact Plan

The tool was implemented in the context of a Design-informed and professionalisation-led module, in an Advertising and Branding master's course from a London-based university, when all assessment strategies had to be revisited due to the first lockdown in the UK, and when all activities moved on to online/remote contexts. For that, the module leader prepared an activity brief entitled "Rethink:Remake the World", guided by an inspirational motto (Extraordinary Times require Extraordinary People with Extraordinary Ideas) and a question-based agenda:

- What are the new institutions needed to recalibrate the world?

- What new economics are required for an equitable society?
- What new products or services are needed?

Students were invited to form teams considering the lockdown constraints. Their fictitious client would be the “New World Order” – representing any possible entity with the power and interest to engage with the resolution of their selected problems. Students would have to deliver a communications product and strategy to the client after assessing the impact of different topics of their preference, using for that the Impact Plan. The latter stage is the one under analysis in this paper, after a set of informal interviews with eight students (out of 25), three mentors and the module leader.

Findings

The 25 students distributed themselves in seven “teams” (three students decided they would proceed individually) which were asked to identify three complex topics that would deserve rethought and remaking. Because of the first COVID-19 lockdown in the UK and moving all teaching to remote activity, half of the students returned to their home countries, to places as apart as Portugal and Japan. That meant the canvas would not be printed out as an A1 to be used in the classroom – as it had been designed for – but would have to be made available fully digital. The researcher created a PDF containing a tiled version (the whole canvas split into eight A4 sheets), designed the deck of cards with full instructions, and all materials were shared with the students via the university VLE.

Freestyle canvas

Some students managed to get the canvas printed and mounted on a wall at their homes (Figure 8, top left), making sure we could see these behind them on our videoconference meetings. Others, to whom printing the canvas would be either too onerous or a break of the lockdown rules in place, manually copied it onto blank sheets of paper and recreated it the best they could, following its original structure and/or colour coding (Figure 8, bottom left). One group re-arranged the canvas, making it more "elastic", in the sense that the only structural boundaries were determined by the three topics under consideration, allowing the five different stages of impact to blend (Figure 8, right).

Impact on Me X Impact on Us

As they were working in teams but separated from their peers, the completion of the canvas went through an initial distance-based issue: while every student was supposed to complete the canvas with, at least, their individual Studies and Career impact scores, in the end, each team would have to have one single canvas that would represent their aggregated values and impact scores, from the perspective of a team, naturally composed by different individuals, with diverse skills, interests and career ambitions. Therefore, deciding on who, from within the team, would complete the team canvas was mentioned as one of the problems students had to face since it was perceived as a highly responsible task given the lack of physical proximity between peers.

Eventually, the anxiety caused by distance-based teamwork was overcome, as evidenced by the students’ feedback, received by email:

… I never thought this would actually work for team-based projects! I tell you, there was a moment in which I was like "oh-oh, this is gonna blow".

Each one of us made a different use of the canvas, and for a while we were sort of puzzled on how we would get the whole thing together since we were resorting to different representations and organising systems, but it really helped us to better understand the relevance of each topic, once we managed to identify the similarities in our results.

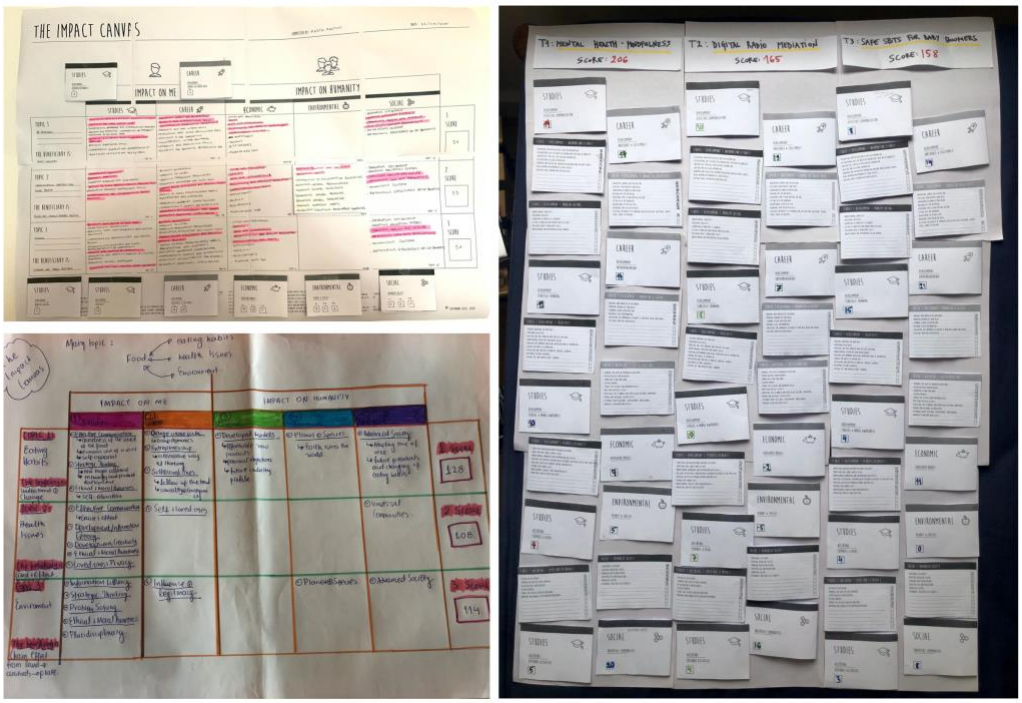

Figure 8. Examples of how the Impact Plan was used by the students.

Evaluating the selected topics

As anticipated, given the context, the topics were mostly COVID-19 and lockdown-related, or even, given the week in which the tool was applied, inspired by George Floyd's murder (Table 2). Ten alumni from previous editions of the same MA course were invited to act as mentors and to identify the teams they would possibly guide throughout the rest of the exercise. For that, each team had to pitch their three topics in a properly setup group videoconference call; since both students and mentors were distributed all over the world, it was agreed that ECT would be the friendliest time zone. These presentations allowed a very straightforward alignment between teams and mentors, as the latter could identify affinities between their own previously developed Master Projects (or current interests) and the presented topics.

Following this, each team used one deck of Outcome Cards per topic to score the possible impact their three potential projects might have (Table 2). Despite the details in the instructions that have been prepared to simplify the use of the canvas, again, the teams approached the scoring system in different ways: whilst some achieved very high impact scores (e.g. teams 1, 4 and 7), others managed to keep numbers consistently low (e.g. teams 2, 3, 5 and 6). That had to do with the fact that higher impact scores were retrieved by adding up all

the partial scores from the assessed Outcome Cards, while the teams with lower impact scores calculated the average of scores obtained in the five impact stages (Studies, Career, Economic, Environmental and Social).

Table 2. The process of scoring impact of the Rethink:Remake topics per team

Team #	The teams' three original topics	Score	Selected topic
1	1. Safe Locations for Baby Boomers	158	1.
	2. Online Environmental Radio	165	2.
	3. Mental health and awareness	206	3. Mental health and awareness
2	1. VR for Music Festivals	28.5	1.
	2. COVID-19 communication for blind people	20.0	2. COVID-19 communication for blind people
	3. Cinema industry during the pandemic	12.4	3.
3	1. Balcony on a lift	20.85	1.
	2. Dating safe venue	21.45	2.
	3. Second skin masks	22.20	3. Second skin masks
4	1. Balancing the workplace	171	1.
	2. Making the most of time with the family	152	2.
	3. Eating habits and disorders	182	3. Eating habits and disorders
5	1. Greenhouse gas emissions	45	1.
	2. Air pollution levels	69	2. Air pollution levels
	3. Nations' self-sufficiency	77	3.
6	1. Domestic violence	23	1. Domestic violence
	2. Immigrants under lockdown	17	2.
	3. Safe dine-in environment	15	3.
7	1. Re-inventing Stadiums	105	1.
	2. Public transport hygiene	108	2. Public transport hygiene
	3. Police violence and authority	101	3.

Most of the teams selected their final Rethink:Remake topic based on its impact score (the highest from all three, see Table 2). The students mentioned that they found this had been a reassuring process since it confirmed their implicit inclinations:

> *We found the impact plan very helpful. It was interesting to see that the scores achieved by us as a team were fully aligned to our own personal gut feeling about the most impactful topics. I am 100% positive on the impact our project may actually have.*

> *I know now what other skills I need to develop; other than the ones I'm developing in the MA.*

Nonetheless, two teams (2 and 5) chose a topic that ranked second. When asked why, both teams referred to the influence of the discussion they had had with their mentors, at the time when they were about to choose their topic.

The role (and influence) of mentors

The mentors seem to have had a similar perception; one of them shared the following statement:

> *Helping the students through the phase of topic selection was quite straightforward. Our first meeting began with the mentees presenting their thought starters for each topic. (…) Together we had an in-depth discussion on the chosen topic which made it clear that they had gathered comparatively more data on it and were eager to learn more about it. I could tell they were genuinely more passionate about this topic and the impact score it got was very encouraging.*

In the context of their Master's course, both teams' mentors had worked in projects that were very much aligned to the topic these teams ranked second and eventually chose: in the case of team 2 – which selected topic 2 (COVID-19 communication for blind people) with 20 points as opposed to topic 1 with 28.5 – their mentor had designed a beverages packaging solution for the blind as part of her own Master's Project, and as for team 5 – which chose topic 2 (Air pollution levels) with 69 points as opposed to their topic 3 with 77 – during her studies, their mentor developed a keen interest towards biophilic design in interior environments as a way of compensating the exterior levels of air pollution.

Given the tool's open and constructivist "operative system", subversion, or rather, influence, can always happen – without it being seen as problematic. Students might come across many other influential factors that go beyond their mentors and which could make them choose a secondly or thirdly rated project. Besides this, since students are not obliged to use all the cards (e.g. not every project nor every individual leans toward entrepreneurial ventures, meaning the Entrepreneurship card can be considered useless and, therefore, discarded), the numerical scores will differ from project/topic to project/topic, potentially leading to unbalanced quantitative results. The obtained score is helpful, but it is not expected to, alone, lead to decision-making, namely when gut feelings and emotions can play such an important role (Damásio, 2006).

The lecturer and the supporting platform

Even though students were given about ten weeks to complete the Rethink:Remake project, from the moment they received both the brief and the Impact Plan resources, the module leader defined clear milestones and, by the end of the third week, all groups would have to have a mentor and one topic, selected from the three they would initially propose. The lecturer made available an online platform to gather the brief, the mentors' bios and profiles – mostly to ease the matching process – and, as the work progressed, the deck of slides of each team's proposals. In his opinion, the Impact Plan proved to be a very flexible tool, mostly relevant at the incubation stage of any project, where users benefit from engaging with non-prescriptive

language or constraining structures, hence allowing them to put ideas together, resorting to whatever language they want:

> *When students are tasked to engage with big real problems and create, develop and execute innovative and disruptive solutions, as with our Rethink:Remake project, then the Impact plan was the decisive tool for understanding their solution's potency from personal, professional and ethical dimensions, enabling them to see the full extent of their idea's impact and application, without the use of an overly academic language but rather in a very conversational way. The results were astonishing.*

Discussion

This paper provides an overview of the potential of a visual canvas following an ontology grounded on reflexivity and speculation. The Impact Plan is suitable to be used as the very first board or tool, before any other visual canvases available and that have been designed to support the other stages of problem-solving and design-based activity. Completely aligned with the Future of Design Education (2020) initiative, which "focuses on design practice components that impact people, communities, and society" (2020, p. 3), this tool will orientate users towards identifying the WHY and picking up the most purposeful and meaningful (motivation-oriented and value-led) project or activity to deliver an impactful outcome, both on the Self and the Others. In fact, in The Double Diamond model proposed by the British Design Council (2021), the first diamond represents the quest toward "designing the right thing" and implicates an exploratory stage of research (Discover) seeking answers to WHY: Why is this a need? Why do people behave the way they do? Why is this relevant? but also, Why shall I/we explore this? Hence, the Impact Plan has been designed precisely with the topic selection moment in mind, to help users sharpen their perspective on the challenges they may face and to keep a more holistic view of how relevant and impactful their solutions may be as their projects evolve.

All teams were invited to ask the above questions, and the completion of the Outcome Cards allowed them to identify (at least partially) their answers, although two teams seem to have been equally influenced by their mentors' answers – which may be a sign of the mentors' propensity for a higher level of involvement in the project. The differences between the outcomes achieved by teams who selected the highest impact score and those who resorted to other decision-making variables will be interesting to analyse.

Moreover, the Impact Plan works not only as a selective device for users to choose from different available topics, but also as a triggering instrument for subsequent practice (such as definition, ideation, prototyping, testing and evaluation). From that perspective, it has not been fully tested (namely regarding assessing the actual impact of the outcomes the students achieved at the Rethink:Remake), but its current prototype seems to have helped confirm the basic premises.

Future Work

Despite its original orientation to individual decision-making, the Impact Plan seems to have worked rather well in aiding groups or teams in making informed decisions. This justifies an additional stream of research focusing on how the wisdom of crowds, quorums, confidence, and collective behaviour influence or are shaped by (shared or not) values and identities.

Given the physical distancing constraints imposed by the pandemic – and since the tool has proved to be useful for teams as well – the Impact Plan is now moving with its template into a fully online digital workspace for visual collaboration (Mural®). Here, users can, synchronously, complete their canvases together, regardless of their location, hence mitigating the printing-related limitations they may have to face. Moreover, a website has been created and published and both canvas and cards can be either downloaded or requested by email, respectively (www.impact-plan.com).

The following step will involve testing the tool in a non-academic industry context: the impact stage Studies can very smoothly adopt a different and more generic label such as Continuous Personal Development or even Learning, which would allow practitioners from any industry or sector to use the canvas. A testing protocol is currently being established with a country-level energy regulator which aims to further develop their design thinking toolkit.

At a later stage, to create a sound experience by which users can go beyond the purpose (WHY), further accessories need to be developed so they can move on onto the working principle (HOW) and both the ideation and development of possible outputs (WHAT), all three dimensions feeding each other and interwoven. That may lead to some kind of artificial intelligence-based resource that 1) real-time gauges and matches the users' inputs on the impact scoring interfaces (the canvas and the cards) and 2) virtually, allows the visualisation of anticipated impact scores on the fly, with a much clearer sense of the possible implications attached to a specific Outcome Card prompt being assessed or not.

Acknowledgements

A very special thank you to Dr Patrick Roberts who has set up and guided the Rethink:Remake exercise and established the environment for students and mentors to work together. Also, to Andrea Siegel, Anna-Christine Mouawad, Anushka De, Charlotte McCooey, Elena Tikhonova, Irene Squitieri, Karoline Lundberg, Laura Bakalka, Lisa Cahill, Lucia Landa, Noelia Sanchez, Sarah El Alj, Sonja Zglobicka, who worked hard and brilliantly as mentors. Furthermore, a word of gratitude to the group of students of MA Advertising, Branding and Communication at the University of West London, cohort of 2019-2020, who contributed to this research with invaluable insights, ideas, results, and feedback, eventually graduating in the strangest circumstances.

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