# Ask me if I am Engaged: A Design-led Approach to Collect Student Feedback on their University Experience

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## Abstract

Despite being an established practice in Higher Education (HE), the collection of feedback from students, to improve their university experience, has yet to find a unified format. Literature shows that, besides enabling collection of data on aspects of the university journey, feedback collection should also be an engaging experience for students and translate into a learning opportunity. To facilitate students' engagement and enhance their role as shapers of their HE experience, we propose an innovative method for the collection of student feedback that leverages the potential of Design Thinking. Our method was tested in two design-led workshops for 59 Master students in a Business School in the UK. The workshops, a blend of content delivery, and individual and team activities, were framed around designing the university of the future. Introduced and concluded by two purpose-built surveys, the workshops were organised in problem-framing; ideas generation; and prototyping. Enthusiastically welcomed by participants as a unique way to co-design their HE journey, the workshops achieved the triple objective of collecting rich data on student feedback; increasing engagement in participants; and delivering notions about design thinking. In this paper, we report on the workshops and share details for our method to be replicated.

## Key words

Design thinking; student feedback; innovative engagement; active learning; design-led workshop.

## Introduction

Gathering feedback from students on their Higher Education (HE) experience has become a normal practice for universities worldwide. A decade ago, the Parliamentary Select Committee report in the UK (House of Commons, 2009) concluded with the following student comment: 'What contributes to a successful university experience is an institution which actively seeks, values and acts on student feedback' (p. 131).

There are several instances, across different countries and education systems, of centralised surveys, administered by HE bodies, to collect data on a national or regional level. Examples include the UK Office for Students' National Student Survey (NSS)[1], or the Australian Government Department of Education and Training's Student Experience Survey (SES)[2]. Besides

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[1] https://www.officeforstudents.org.uk/advice-and-guidance/student-information-and-data/national-student-survey-nss/

[2] https://www.compared.edu.au/

these, virtually every university collects student feedback in order to improve its service offerings. Student feedback in this sense can be defined as the use of formal processes to collect information from students about the service they receive in HE (Richardson, 2005). This may refer to perceptions about learning and teaching; support (e.g., libraries); environment (e.g., lecture rooms, laboratories, social space); facilities (e.g., canteens, student accommodation, sport facilities); and external aspects (e.g., finance, car parking and the transport infrastructure) (Harvey, 2011).

Extensive research has been dedicated to investigating how to assess student satisfaction with HE, to identify antecedents of quality. Existing research has mainly employed a quantitative approach, with surveys and questionnaires being particularly common (Douglas, Douglas, McClelland, & Davies, 2015). This has led to significant criticism, in particular with regards to some limitations of satisfaction surveys, among which low levels of student engagement (Harvey, 2011). The present study aims at filling this acknowledged gap in the literature, by exploring an original approach to measure students' satisfaction while enhancing their engagement and learning.

Student engagement has been recently unpacked in campus engagement and class engagement (Gunuc & Kuzu, 2015) and its essence related to the interaction that students have with the HE ecosystem (Bowden, Tickle, & Naumann, 2019). Research has identified connections between student engagement and several success factors such as citizenship behaviours (Zepke, Leach, & Butler, 2014), acquisition of real-world skills (Krause & Coates, 2008), and achievement and learning (Holmes, 2015). Student engagement is the basis for *active learning*, which includes 'any instructional strategy that requires students to engage in meaningful learning activities and think about what they are doing' (Barr, 2014, p. 308). Ensuring engagement whilst collecting student feedback should therefore be a priority when carrying this type of activity out.

In this study, we propose a method to actively engage students in providing feedback on their HE experience, whilst ideating possible solutions for the *pain-points* they identify. Our method is anchored in the Design Thinking (DT) approach, which has been recognised as a dimension of *partnership working* (McIntosh, 2019, p. 234) to facilitate student engagement (Dunne, 2016). Stemming from an application of *designerly* thinking (i.e., thinking like a designer) in disciplines and areas that are not typical of design intervention (e.g., business, education, etc.) and by non-designers (Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013), DT has seen an exponential growth in recent decades (Brown, 2008), which has not spared HE. To test out method, we delivered two design-led workshops aimed at gathering students' perceptions around their university experience and asking them to design their *university of the future*. The workshops were a blend of content delivery and practical activities, which have also exposed the students to the DT approach, enhancing their learning experience.

## Background of the study
### *The importance of student feedback for universities*
It can be argued that students nowadays see themselves as *customers* who are buying a service (Nixon, Scullion, & Hearn, 2018). In this regard, they are becoming more vocal in expressing their perceptions of good university experience in general (Titus, 2008). With this growing

*consumerism* of HE, universities have become more market-oriented (Baldwin, 1994) and place a great importance on concerns with quality of their service.

HE institutions collect student feedback with the purposes of enhancing the student experience of learning and teaching; contributing to monitoring and review of quality and standards; ensuring the effectiveness of course design and delivery; enabling a dialogue with students; helping students reflect upon their experiences; as part of the teaching and learning process; identifying good practice; measuring student satisfaction; and contributing to staff development (Brennan & Williams, 2004). Despite these important uses, the validity, reliability and quality of student feedback may be questionable (Carless & Boud, 2018). As such, some researchers argue that gathering student feedback has turned into a basic ritual completed at the end of every course, not capturing the real meaning and purpose of such practice (Mandouit, 2018).

Although feedback from students is constantly collected in many institutions, it is less clear whether it is used to its full potential. Indeed, the more data institutions gather, the more cynical students seem to become, the less valid the information generated and the less carefully the student perspective is considered (Harvey, 2011). Church (2008) (as cited in Harvey 2011, 5) noted that 'students can often feel ambivalent about completing yet another course or module questionnaire. This issue becomes particularly acute when students are not convinced of the value of such activity – particularly if they don't know what resulted from it.' Hence, the necessity to fill a gap in the methodological literature on student feedback and by searching for effective student feedback practices that would also provide appropriate levels of engagement.

### *Approaches to student feedback*

There has been a significant growth of, and sophistication in, processes designed to collect views from students. Typically, a common method for gathering feedback is via student ratings of their level of satisfaction and perceptions of learning gains at the end of a course (Samuel, 2019). Though some researchers believe that the most practical and effective method of gathering student feedback is via structured and planned feedback in the form of questionnaires, comprising agree/disagree statements and open-ended questions (Hand & Rowe, 2001), others find questionnaires or any types of surveys as poor ways of collecting student feedback (Harvey, 2011).

Harvey (2011) has identified four reasons for the ineffectiveness of student satisfaction surveys. First, they are indirect and often there is no clear indication to students of the value or use of the data provided. Second, surveys often do not provide a nuanced understanding of student concerns, issues and acknowledgements. Third, due to lack of detailed understanding, surveys usually offer a space for open comments that seem to be in opposition to the generally satisfactory ratings from closed questions. Finally, most surveys do not include questions about how improvements could be made, and students lack the opportunity to suggest their views on this issue. Hence, there seems to be a significant degree of indifference on the student part as the surveys seem to be simply providing, as Harvey (2011) puts it, a legitimation for inaction. Several scholars prefer to conceptualise feedback in dialogic and processual terms (Carless & Chan, 2017; Carless, Salter, Yang, & Lam, 2011; Rust, O'Donovan, & Price, 2005) presupposing feedback as an 'interactive exchange in which interpretations are shared, meanings negotiated'

(Carless et al., 2011, p. 397). This means that institutions should provide students with opportunities to engage effectively in the ways of thinking and practising of academic community where student voice is respected and taken seriously (McCune & Hounsell, 2005; Price, Handley, Millar, & O'Donovan, 2010).

Harvey (2011) suggests that a dialogic and interactive approach to exploring student perspectives may be seen in the form of face-to-face discussion groups within the classroom, *chaired* by the lecturer, a student or an external facilitator. These may be formally-minuted scheduled events or based on focus groups. Discussions may be conducted virtually, through blogs, or webinars.

In addition, Hand and Rowe (2001) argue that gathering student feedback using only one method of collection is not sufficient or effective. Considering student feedback as part of a continuous cycle of evidence gathering, reflection and change, they propose a *developmental approach* to eliciting and using feedback from students. This model suggests collecting a range of data using various methods throughout the academic year. For example, institutions can start the academic year by gathering informal feedback and then use the generated data to create a mid-year questionnaire at the subsequent stage. Further, focus group interviews may be employed to elaborate on issues and propose solutions. The gathered information is then shared with the staff for professional reflection as well as for communicating back to students how their feedback was implemented for practice improvement.

In an attempt to expand existing theory and practice on student feedback practices in HE, the present study aims at analysing how a design-led approach can be effective in: 1) Collecting rich data about students' experience; 2) Offering students an engaging experience in which they identify potential improvements in their journey through HE; and 3) Teaching the students the basics of DT, the approach we selected to conduct this research. The next section will briefly review literature on such approach.

### *Design thinking and design-led initiatives*

Design Thinking (DT) has emerged in recent years as an approach to facilitate creative problem-solving (Brown, 2008), in several areas: from the improvement of services for citizens and other constituencies (service design), through the betterment of products (product design), to the streamlining of existing processes (process design) or customer experiences (UX), the fields of application of DT are potentially endless. Literally, DT refers to *thinking like a designer* and entails utilising design practice and theory beyond the realm of design (Johansson-Sköldberg et al., 2013). Essential to design practice and theory is the concept of human-centredness and the usage of *empathy* as a way to experience users' emotions, hopes and fears, to generate functional and practical solutions that truly reflect users' needs (Liedtka, 2018; McDonagh & Thomas, 2010).

The practice of directly involving end-users in the design activity is called *user engagement*. Similarly, *customer co-creation* indicates the practice, diffused in design-led exercises and service design in particular (Kolko, 2018; Kummitha, 2019), of making the customers of a service (e.g., the travelling public in an airport) protagonists in the problem-solving activity (e.g., the need to improve the concourse experience in an airport). In these practices, creative collaboration is leveraged to produce value between the deliverers of a service and its end-

users, with the purpose of designing or re-designing such service for the latter. User engagement is centred around the assumption that end-users best represent their needs and feelings towards a service, hence their involvement in the design stage increases the chances of success. Engagement fortifies the connection between the designer and the end-users (Chathoth, Ungson, Harrington, & Chan, 2016).

In recent years, DT has gained traction in HE degrees and has been praised as an effective approach to teach, among others, business (Dunne & Martin, 2006), entrepreneurship (Nielsen & Storvang, 2014), and, in general, twenty-first century skills (Noweski et al., 2012). Thanks to its team-based approach and orientation to practical problems, DT improves the classroom experience of both learners and teachers, in particular in the light of the contemporary focus on constructivist learning and teaching (Scheer, Noweski, & Meinel, 2012). Moreover, DT entails student engagement in a series of cooperative activities, which demonstrably lead to information retainment, higher motivation, and increased confidence (Cavanagh, 2011).

Several schools of thought have conceptualised DT as a process composed by various steps (Liedtka, 2015). In all, the process starts with one or more phases dedicated to investigating the problems at stake, to frame them in an agreed upon way, before proceeding to ideating solutions, prototyping, and testing them and, where necessary, iterating the process in a cyclical way, to ensure continuous improvement. Research is a fundamental component in the DT process and traditionally employs qualitative data collection methods such as facilitated workshops, user interactions, semi-structured interviews and qualitative surveys (Tate, Bongiovanni, Kowalkiewicz, & Townson, 2018).

By virtue of its capacity to engage users in the co-creation process and focus on practical problems whilst utilising qualitative (and, less frequently, quantitative) research methods, a DT approach was utilised to conduct the present research. In this study, we present the results of an innovative method to collect student feedback in an engaging format. Our design-led approach allowed us to address the following research questions:

*RQ1: Can a design-led workshop enable the collection of rich data around students' perceptions and feedback on their university experience?*
*RQ2: Would students like this format and show sufficient level of engagement?*
The following section illustrates our method.

## Method
In our research, we adopted a design-inspired format that allowed us to collect student feedback whilst offering students an engaging experience and providing them with basic knowledge in the fields of DT and design-led innovation, topics that were not present, at the time the research was conducted, in the course offerings of the Business School.

### *The University of the Future: A Design-led workshop*
We organised two design-led workshops held at a UK-based Business School in April 2019 and February 2020. The workshops saw the participation of 27 and 32 (n=59) Master students, who were primed to an activity which would teach them the basics of DT, together with testing an innovative approach for the collection of student feedback. To do so, the focus of the

workshops was on designing the university of the future by tackling some of the pain-points the students experienced in their journey at the institution. The workshops lasted on average 6 hours each. To offer students a partial reward for their voluntary participation, the workshops were counted against the extra-curricular activities the students had to engage with, to achieve an extra-curricular award. Research shows that extra-curricular activities have a positive impact on the live student experience (Buckley & Lee, 2018; Stuart, Lido, Morgan, Solomon, & May, 2011). Working lunch was also offered. Structurally, the workshops saw an alternation of content delivery on DT by the facilitator and individual and group activities in which the students applied contents, tools and techniques. The research obtained ethical clearance from the business school and students completed their consent forms at the very start of the workshops. Participant information sheets had been shared with the students in the days leading to the workshop, to save time on the day.

First, students were asked to complete a 15-minute survey on their university experience (Appendix 1). At the end of the workshops, they were asked to complete a 10-minute survey on the workshop experience (Appendix 2). To maintain homogeneity in the collected data, format and structure of the two workshops were almost identical, except for some minor variations. Table 1 illustrates the structure and format of the workshops.

*Table 1: Structure and contents of the workshops*

| Content | Approx. duration (mins) | Format | Notes |
|---|---|---|---|
| Activity: Signature of consent forms | 2 | Individual | Participant information sheets shared previously |
| Activity: Pre-workshop survey | 15 | Individual | |
| Delivery: Introduction to workshop | 5 | Plenary | |
| Activity: Icebreaker: One-career goal and one-action Post-It | 15 | Individual + Group | Drawings only; then presentation (in groups) |
| Delivery: DT, Basic concepts | 10 | Plenary | Origins of DT |
| Delivery: DT as a process | 10 | Plenary | Schools of thought and stages |
| Delivery: Problem-framing | 5 | Plenary | Importance of - |
| Activity: Pains and gains of your university experience | 60 | Individual + Group + Plenary | 30 minutes activity + 30 minutes presentation (plenary) |
| Delivery: Personas | 10 | Plenary | Canvas introduced |
| Delivery: Value proposition | 10 | Plenary | Canvas introduced |
| Activity: Personas and Value Prop (Working lunch) | 60 | Group + Plenary | 40 minutes activity + 20 minutes presentation (plenary) |
| Short break | 10 | | |
| Delivery: Ideation | 15 | Plenary | A selection of ideation lenses presented |
| Delivery: Storyboarding and Business Model | 10 | Plenary | Canvas introduced |
| Activity: Ideation: Design your University of the Future | 140 | Group + Plenary | 70 minutes activity + 60 minutes presentation (plenary) + 10 minutes Q&A |
| Activity: Post-workshop survey | 10 | Individual | |
| Delivery: Conclusion | 5 | Plenary | |

Mirroring trends in postgraduate education, students (n=59) represented around 10 nationalities and 15 degrees/courses, among which the most common ones were international accounting and finance, international strategic marketing and economics. Besides a few exceptions, none of the students had preliminary knowledge on DT.

## Results

We present here aggregated findings from the two workshops based on the three main data collection stages/methods in our research: pre-workshop survey (collecting data towards addressing RQ1); workshop activities (RQ1); and post-workshop survey (RQ2).

### *Pre-workshop survey*

Purpose of the pre-workshop survey was to obtain rich, contextual data around students' perceptions of their university experience. This sub-section illustrates our findings.

The first question in the survey asked students, in an open-answer format, to identify what

skills universities ought to teach/develop mainly in the future. Entries were 159 and were coded by the researchers in 43 categories, with the following leading categories: *Communication, public speaking & presentation skills* (18 entries), *Transferable, practice-based skills* (17); *Innovativeness & Creativity* (13). As a follow-up question, students were required to indicate how they thought universities should teach/develop such skills (open answer): students' comments included *guest lectures by practitioners*; *real-world experience*; *field trips to organisations' HQs;* and *better response to student feedback.*

The following question asked students to identify the three most compelling issues they experienced in their HE journey. The 155 entries were coded in 13 categories or 'themes', among which the most popular ones were: *Physical experience in facilities and logistics* (33 entries); *Courses & programmes design and communications* (23); and *Real-world relevance* (21). Similarly, students were required to identify the three most positive aspects of their HE experience. The 121 entries were coded in 8 categories or 'themes', among which the most entries were attracted by *Environment & Atmosphere* (22); *General activities, events & social* (21); and *Teaching & learning* (19).

The remainder of the survey asked students to complete 5-point Likert-scales on their agreement with 27 statements on: 1) general perceptions with regards to their university experience (11 statements); 2) their place in the university (8); 3) their place in the workplace (4); and family pressures' influence on their university experience (4).

In terms of 1), the statements with which participants agreed the most were *universities provide theory-based learning opportunities* (75% agreement) and *universities have the possibility to influence young people's career path today* (71%). The statements with which participants agreed the least were *in 20 years, universities will look mostly the same as today* (63% disagreement) and *universities provide enough internships opportunities* (47%).

As for 2), the following statements were met with most agreement by participants: *students have the opportunity to have a say in how university services could be improved* (78%) and *universities would not even exist if there were no students* (69%). The following ones were met with most disagreement: *I am at university because I need a piece of paper to find a job* (38%) and *my grades are fundamental in my university experience* (17%).

With regards to 3), participants mostly agreed with the statements *I think that the practical knowledge I am getting in my university will be relevant in the workplace* (55%) and *I am studying for a job that will be my job for the next 10 years* (52%). Participants mostly disagreed with the statements *I think that the theoretical knowledge I am getting in my university will be relevant in the workplace* (22%) and *I am studying for a job that will be my job for the next 10 years* (21%).

Finally, with regards to 4), the following statements were particularly welcomed by participants: *my family had a strong role in my decision to go to university* (36%) and *families should be further engaged in the university experience* (28%), whilst the following ones were mostly met with disagreement: *my family will have/had a role in my decision on the first job I will have/had after university* (48%) and *my family had a strong role in my decision to select my degree* (41%).

## Workshop activities

After an ice-breaker task, the first activity in the workshop was aimed at helping the groups of participants frame the problems they deemed most relevant, in order to lay the foundations for subsequent ideation of solutions. To do so, groups were asked to first, individually write on colour-coordinated post-it notes as many *pains* and *gains* as they could think of in their university experience; and second, single out the top 5 in each category. Groups were also asked to group top pains and gains in themes. A total of 199 pains (116 in the first workshop; 83 in the second one) and 127 gains (76; 51) were noted by the 59 participants (27; 32). As for the group rankings, themes were similar across the two workshops, with topics including *academics, management, facilities, social events, city, country,* etc., reflecting all the different facets of a university experience. Figure 1 illustrates two examples of artefacts elaborated by two groups in this first activity.
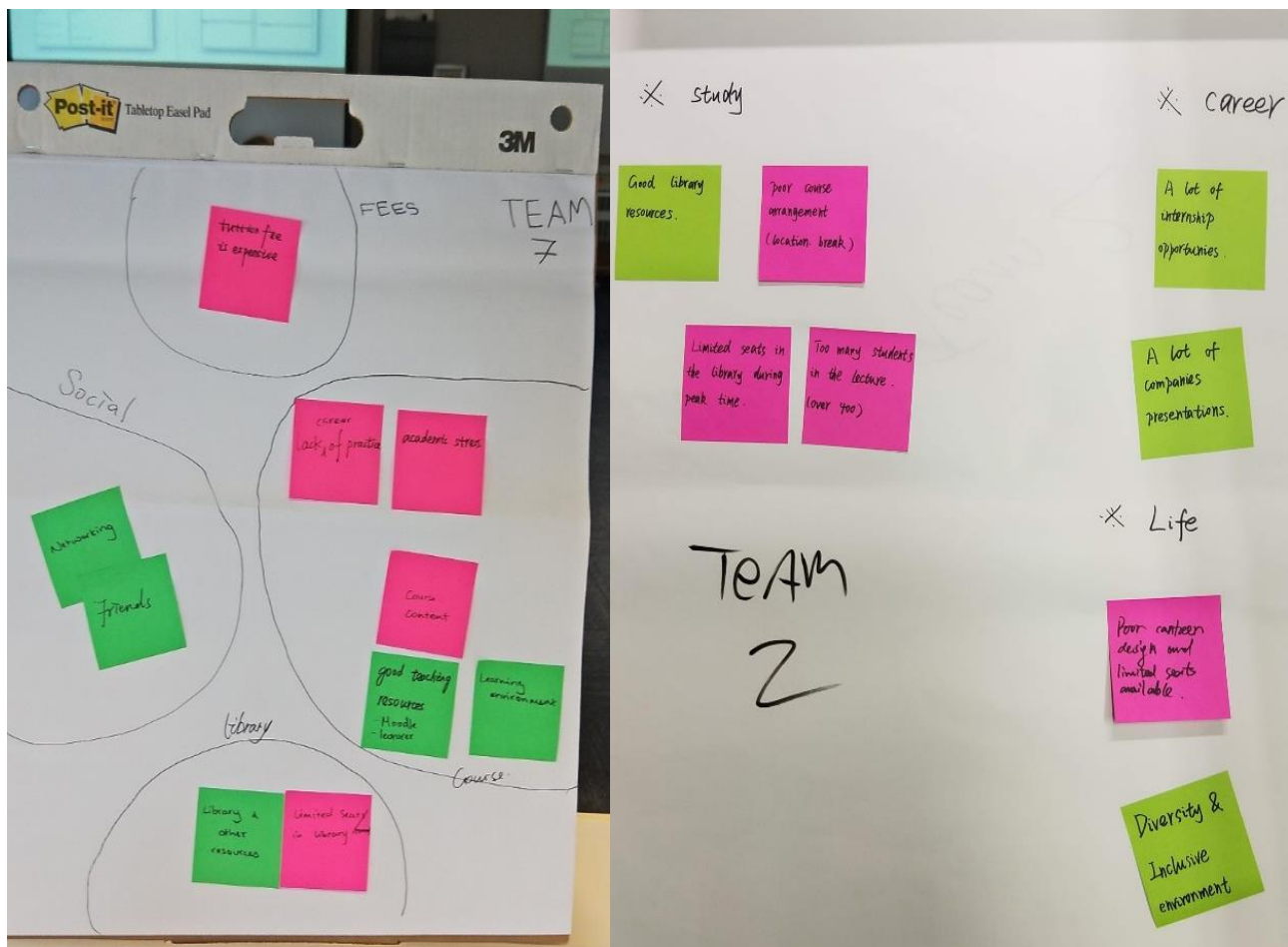


**Fig 1 Selection of top pains and gains and theming by two groups**

The second activity revolved around *user personas* and *value propositions*. Participants were first made familiar with the concept of a *persona* as a stereotypical representation of a user, classified according to specific dimensions, as a way for designers to materialise whom their solutions should be addressed to. Groups were provided with a purpose-built *persona canvas* (Appendix 3) and asked to complete it, using their reflections and considerations from the first activity. Participants were free to ignore dimensions of the canvas they deemed not relevant or

add missing ones. The following categories and dimensions were proposed in the canvas: *Demographics*, *Personal features*, *Technographics* and *University experience.*[3]

Participants were then made familiar with the concept of *value proposition* as a bridge between problem framing and solution ideation. As for the personas, groups were provided with a *value-proposition canvas*[4] asking them to illustrate *jobs-to-be-done*, *pains* and *gains* and then to produce *pain relievers, gain creators* and *products & services* for their persona (Appendix 4). To exemplify the findings from this second activity, we present the persona and value proposition canvas produced by one team (Figure 2 and Table 2).
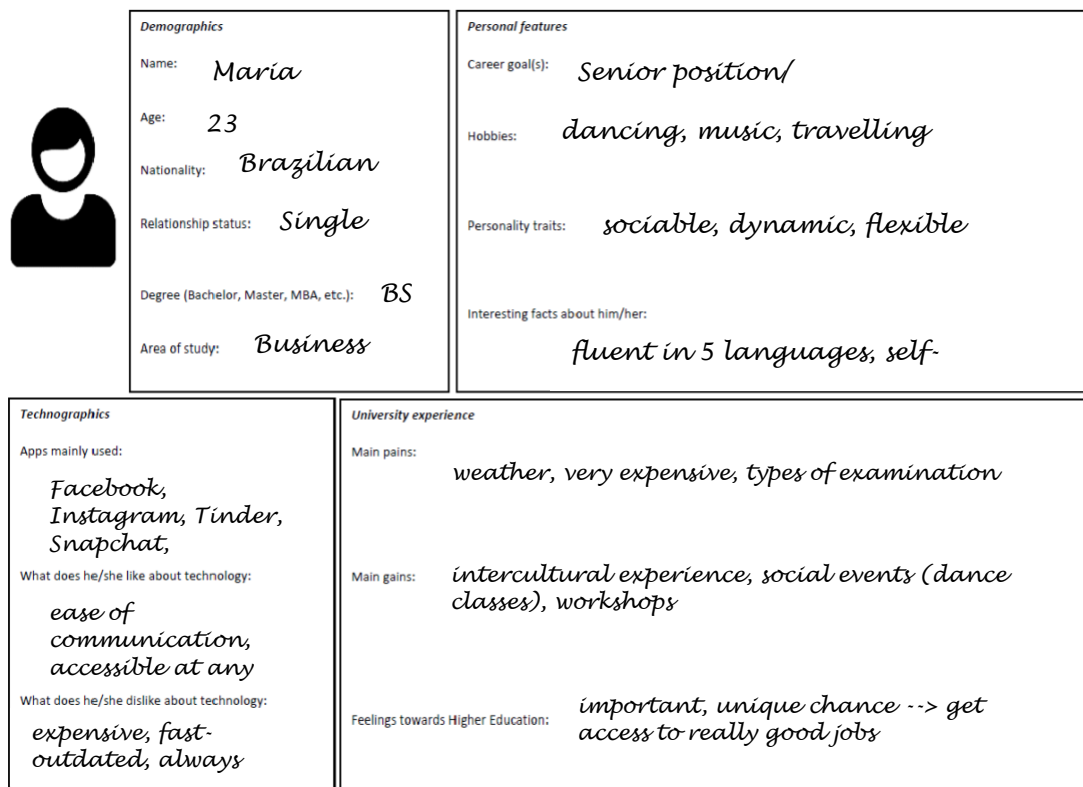


Persona canvas - Team:

| Demographics | | Personal features | |
|---|---|---|---|
| Name: | Maria | Career goal(s): | Senior position/ |
| Age: | 23 | Hobbies: | dancing, music, travelling |
| Nationality: | Brazilian | | |
| Relationship status: | Single | Personality traits: | sociable, dynamic, flexible |
| Degree (Bachelor, Master, MBA, etc.): | BS | Interesting facts about him/her: | |
| Area of study: | Business | | fluent in 5 languages, self- |

| Technographics | University experience |
|---|---|
| Apps mainly used: Facebook, Instagram, Tinder, Snapchat, | Main pains: weather, very expensive, types of examination |
| What does he/she like about technology: ease of communication, accessible at any | Main gains: intercultural experience, social events (dance classes), workshops |
| What does he/she dislike about technology: expensive, fast-outdated, always | Feelings towards Higher Education: important, unique chance --> get access to really good jobs |

**Fig. 2 Sample of persona canvas (second activity)**

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[3] Based on the results of the first workshop, the dimensions top pains and top gains were dropped from the canvas proposed in the second workshop, as redundant.

[4] We utilised an adjusted version of the value proposition canvas available at https://www.strategyzer.com/

*Table 2: Sample value proposition canvas (Maria; second activity)*

| JOB-TO-BE-DONE *(What is the job your user wants to get done?)* | PAINS *(What is annoying or troubling your user? What is preventing them from getting the job done?)* | GAINS *(What would make your user happy? What would make their life and the job-to-be-done easier?)* | PAIN RELIEVERS *(How can you help your user to relieve their pains? What problems can you eradicate?)* | GAIN CREATORS *(What can you offer your user to help them achieve their gains?)* | PRODUCTS & SERVICES *(What are the products and services you can offer to your user so that they can get their job done?)* |
|---|---|---|---|---|---|
| Graduation; internship; employability; soft skills | Lack of integration (student-professor-administration); lack of practical experience | Study opportunities; intercultural groups; workshops; supportive administration | More individual meetings with administration; more scholarships; more real case studies; more study-work programmes; incentives for performance | More structured courses and timetable; course description; integration of dissertation & work experience | Online teaching resources; Moodle; career service - focus on international students; career fairs - networking and connections |

After completion of the second activity, participants were introduced to a series of ideation lenses (Bongiovanni, 2019; Recker & Rosemann, 2015), as innovative perspectives to creatively solve some of the identified problems. These same lenses were suggested as possible approaches for the third activity: in this, the groups were tasked with selecting one or more *pains* and develop solutions. To do so, besides the ideation lenses, the students were primed to use storyboarding (to illustrate their solutions) and a business model canvas (to help them frame their solutions[5]). The groups were tasked with referring to their persona and value propositions respectively as users and proof-of-value for their solutions. The third activity also included a final presentation of the proposed solutions by each group, in plenary session. The activity concluded the workshop.

The thirteen groups across the two workshops produced the solutions illustrated in Table 3.

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[5] We utilised an adjusted version of the one available at https://www.strategyzer.com/

*Table 3: Solutions ideated by the 13 groups*

| Group (random #) | Solution | Addressed problem(s)/opportunity(-ies) |
|---|---|---|
| 1 | Accelerating Future: a partnership between the university and employers to partially fund tuition fees | Connection between industry and graduates; job placement |
| 2 | New student mobile app: with course structure, connections with alumni, informal discussion, etc. | Barriers to settlement for new students; course design and structure |
| 3 | Smart university platform that connects students around the world with partner universities | Lack of synergies and connection among universities; university-family connection |
| 4 | Global network of universities and employers including real-world projects commissioned to students and sharing of online courses across universities (MOOCs) | Lack of synergies and connection among universities; job placement |
| 5 | Mixed on-campus/off-campus course experience | Financial costs associated with on campus study mode; cultural barriers |
| 6 | Online study mode with in-company training that leverages AI | Financial costs associated with on campus study mode; affordances of digital technologies |
| 7 | Safety and room finding mobile app | Room-finding; difficulty with navigating the campus layout; logistics; safety |
| 8 | Smart library: a mobile app for instant booking of free spots | Overcrowded library |
| 9 | Space-check app: a mobile app for synched, available seats overview | Overcrowded library |
| 10 | Portfolio of solutions to help international students with cultural barriers | Cultural barriers |
| 11 | Room-finding and attendance-tracker mobile app | Room-finding; logistics; opportunity for online learning |
| 12 | Seat assistant mobile app to track seat occupation on university facilities | Room-finding; logistics; gamification |
| 13 | University mobile app with room-finding feature and real-time feedback | Room-finding; logistics; lecturers-students communication |

## Post-workshop survey

At the end of the workshop, participants were asked to complete one last survey, aimed at assessing their understanding of, and satisfaction with, the workshop. This survey served the researchers to gain an understanding of the level of engagement by the participants (RQ2). The two charts below offer data in terms of participants' ideas, perceptions and interpretations (Figure 3) and participants' satisfaction with the workshop and the proposed approach (DT) (Figure 4).
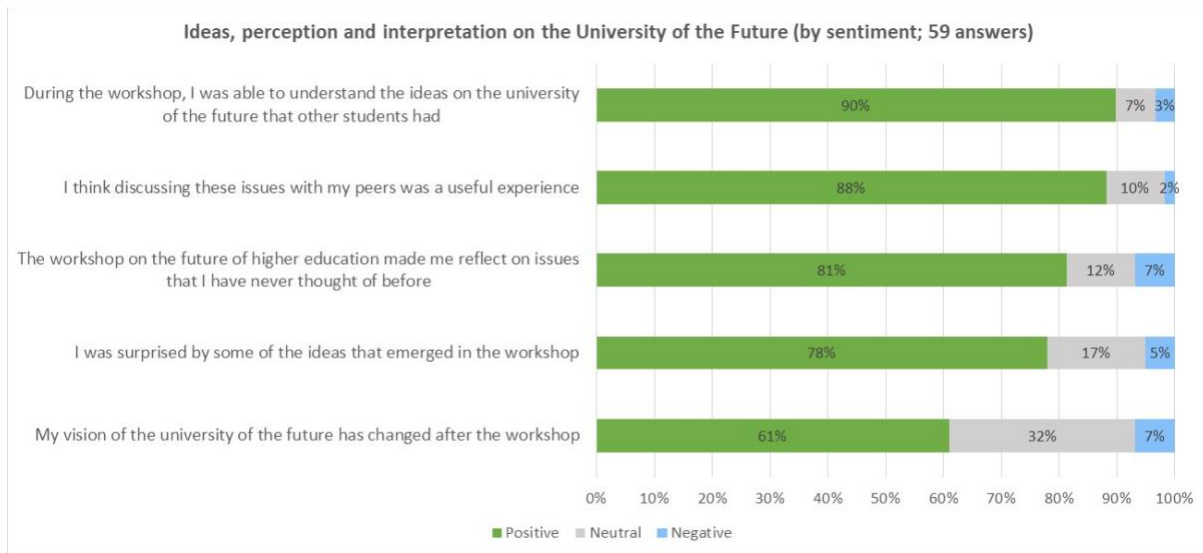
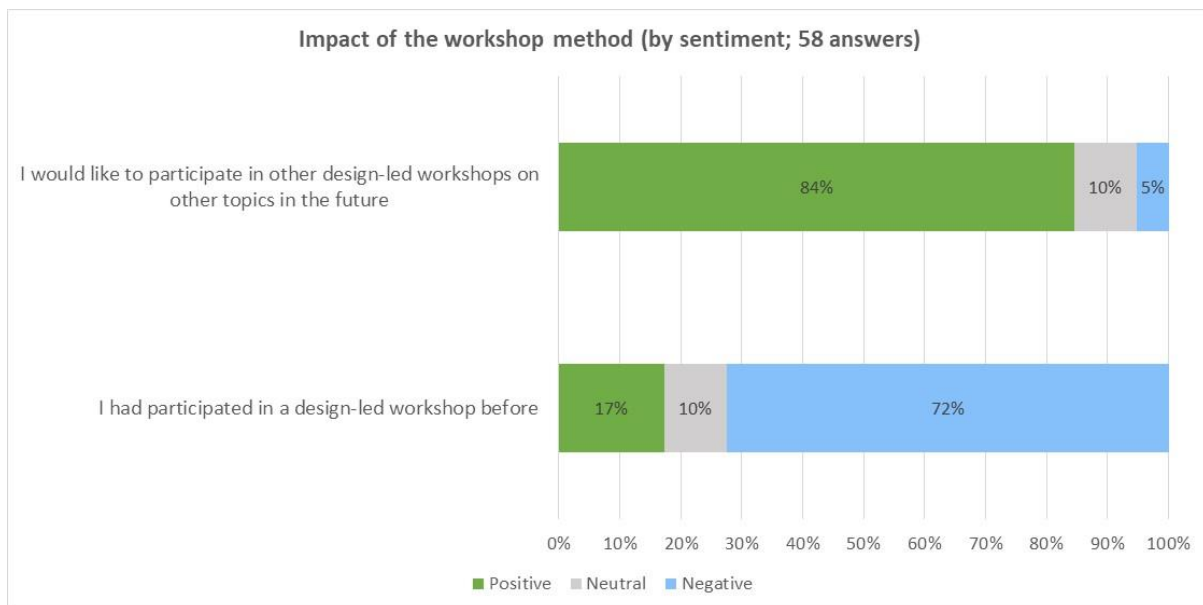**Fig. 3 Post-workshop survey (contents and methods)**



**Fig. 4 Post-workshop survey (level of satisfaction by participants)**

One last open-ended question asked participants for additional remarks on the workshop. The overwhelming majority of such comments were positive, with regards to aspects such as the method, the facilitation, the lecturers and the level of interactivity (Appendix 5). One only comment was negative, with no further explanations as for why. Suggestions for improvement included reducing duration and parts of delivery vs. activities.

## Discussion

At the beginning of our investigation, we posited two RQs:

RQ1: *Can a design-led workshop enable the collection of quantitative and qualitative data around student perceptions and feedback on their university experience?*

RQ2: *Would students like this format and show sufficient level of engagement?*

As for RQ1, the approach we propose in the present paper mixes quantitative and qualitative methods for the collection of student feedback. This enables a richer understanding of students' perceptions around their university experience but can be shaped to focus on specific components such as study facilities, course design, accommodation, internships and job placement opportunities.

The mixed-methods approach (Creswell, 2014) utilised in our workshops allowed us to collect a significant amount of data on the concept of the university of the future, with participants emphasizing the importance of developing communication, public speaking and presentation skills, by increasing the number of practice-based initiatives. Descriptive statistics could be mainly drawn from responses to the pre-workshop survey.

Despite a focus on university and HE in general, participants mainly utilised their experience at their university to assess the pros and cons of their journey through HE. As a result, location-specific aspects such as usage of physical space, logistics and design of courses emerged as areas for improvement. Likewise, features such as environment and atmosphere, social activities and teaching and learning were indicated as strengths. Unsurprisingly, our data revealed that participants recognize the predominance of theory in universities and that universities are rapidly changing, to the point in which, in twenty years, they will look clearly different from now. Among others, participants acknowledged that they have an opportunity to express themselves around areas for improvement in university services and that, without students, universities would not even exist. Finally, in terms of family role, our data showed that whilst families were important in the decision to attend university, the selection of a specific degree was not equally impacted by the family influence.

In the workshops, group tasks represented an occasion for socialising, which was facilitated by an ice-breaking activity (Weisz, 1990). A crucial component of design-led exercises, the problem-framing phase in our workshops saw participants *vent out* their concerns with their university experience and the elements that they considered the most positive. The fact that a total of 199 pains and 127 gains were identified should not be misleading: the workshops were expressly framed as an exercise to ideate *fixes* to current issues and we believe this has primed participants to adopt a somehow critical approach.

Subsequently, activities such as persona and value proposition canvassing allowed the researchers to *dig deep* in how students see themselves as actors in the university cosmos. Expanding this mapping exercise to dimensions that are apparently not associated with HE (e.g., the short- and long-term goals of the persona) offered a more complete comprehension of the dynamics that students experience. In this sense, consistently with existing literature (Zhou, Jindal-Snape, Topping, & Todman, 2008) foreign participants in our workshops underlined the existence of significant cultural and social barriers, especially upon relocation, that a university needs to cater for, when designing student services.

In terms of RQ2, one of the key strategies to inspire engagement in design-led, facilitated activities is by first explaining the reasons for such activities (as epitomised, for example, in Sinek (2009). Well before the workshops (by means of a dedicated webpage) and at the start of

them, we clarified what the purposes of this project were and stressed the importance for participants to co-create solutions for the problems/opportunities for improvement they identified. Co-creation is in fact an effective strategy in ensuring engagement (Bovill, Cook-Sather, Felten, Millard, & Moore-Cherry, 2016). The alternance of parts of content delivery with practical exercises aimed at enabling participants to apply the learnt contents, and fostered those dialogue and interactivity that numerous researchers have indicated as a necessary component in contemporary feedback practices (Carless et al., 2011).

Furthermore, in order to overcome one of the limits of feedback collected exclusively through surveys, our approach dedicated a significant amount of time to the ideation (by the participants) of responses to the pains/issues identified in the feedback components of the workshops. Students were not simply left with the perception that information was passively drawn from them but had an active role in elaborating innovative solutions to solve problems in their university experience. To do so, ideation lenses (Author, 2019; Recker & Rosemann, 2015) proved an effective technique. For others, free brainstorming was the chosen approach. Feedback on the ideas emerged through the workshops was collected by means of questions that asked how clear the presented ideas were (clarity; 90% of participants agreed ideas were clear), how useful the discussions were (usefulness; 88%), how original the approach was (originality; 81%), how surprising ideas were (surprise; 78%) and the extent to which the workshops changed participants' vision on the university of the future (vision; 61%). Overall satisfaction with the workshops (the crucial feedback component) was assessed by asking participants whether they would participate in other design-led initiatives in the future (84% responded affirmatively; 10% was neutral; 5% said 'no'). Considering that 72% of participants had never participated in a design-led exercise before, we can conclude that the overwhelming majority of them found our design-led approach relevant and effective for providing feedback and laying the foundations for innovative solutions to address some of the identified problems.

### *Practical implications*
Informal conversations with the participants at the end of the workshops highlighted an interesting fact: students enjoyed in particular the possibility of providing feedback on their whole university experience, and not just on a specific subject/course, which is the type of feedback they are usually requested to provide. Our study emphasises therefore the need to complement subject-specific satisfaction surveys with the collection of student feedback on their whole university experience. This could be fruitfully managed, for example, by service design/transformation departments in universities and/or specific schools.
Further practical implications can be drawn from some of the qualitative comments provided by participants at the end of the workshops (Appendix 5). Besides the overall satisfaction with the approach (in particular, its interactive nature), several students suggested some components could be shortened (as the delivery on DT theory and techniques). Providing working lunches was also perceived as a plus in the initiative, and so was the quality of the lecturers-students interaction.

Several recommendations can be made to the benefit of fellow researchers who intend to replicate our approach. First, a balanced mix between delivery and activities is needed, to ensure that, on the one hand, participants acquire sufficient knowledge (in the form of design-led tools and techniques) and, on the other hand, have a chance to apply such knowledge. Second, the ability of the lecturer(s) in engaging the participants should not be neglected

(Carless & Boud, 2018): the approach is designed to foster participation, but the delivery skills of the lecturer(s) need to be up to standard. Third, carefully crafted incentives (in our case, the learning experience and the inclusion in the portfolio of courses for an extra-curricular award) can be considered to facilitate participation.

### *Limitations and areas for further research*

A first limitation of our study was the usage of non-validated surveys to assess students' perceptions and their evaluation of their overall university experience. As for the former, a lack of available instruments in the literature suggested us to design our own surveys. As for the latter, the literature abounds with surveys for feedback on specific courses (IPSOS Mori - Office for Students, 2020; Social Research Centre - Commonwealth of Australia, 2020), but suffers from scarcity of instruments to assess the overall university experience. Moreover, our approach is anchored in the discipline of DT, one of the main purposes of which is ideating innovative solutions to complex problems. This required enough flexibility and a qualitative assessment of the student journey through university, not a quantitative one. Ultimate purpose of such assessment was priming participants into the *solution-mode* and not only gathering data for analysis. In a word, the primary, intended beneficiaries of the problem-framing phase were the participants, not the researchers. Hence, the adoption of a purpose-made survey.

A second limitation of our study was in the relatively small sample of participants across the two workshops (59), which could affect the generalisability of our findings. We invite fellow researchers to replicate our study in order to extend the sample and verify results and we are available to provide support on this.

## Conclusion

In this study, we adopted a design-inspired format to collect student feedback on the university experience, enhance students' engagement with the provision of such feedback, and provide them with basic knowledge on DT. This allowed us to shape an exercise that made the students protagonists in the elaboration of solutions around the pain-points of their experience. Through mixed methods, we collected a significant amount of data on the concept of the university of the future, pros, and cons of students' HE experience both in academic (teaching & learning) and non-academic (social and cultural) aspects, as well as creative solutions for improving the HE journey.

We clearly communicated to the students the purpose of the project before and during the workshop. This, coupled with the way in which we designed the workshop activities, fostered high levels of student engagement. Our design-led approach enhanced dialogue and interactivity, which are recognised as vital components of effective feedback collection.

The results of this study demonstrate that DT can be fruitfully utilised as an approach to collect student feedback on their journey through HE. This, our study demonstrates, would not only benefit teachers and researchers, but also students. At the same time, we acknowledge the need to increase training opportunities for academics willing to adopt DT in their interactions with students. Based on our experience, such training should be practice-based as learning how to run design-led workshops is best done *by doing*. We invite other researchers to join us in testing our approach, with a view to perfect it over several iterations, across different HE systems.

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## Appendices

### *Appendix 1: Pre-workshop survey*

University/College/School
logos here

**The Future of Higher Education**

**Pre-Workshop Survey**

**A.      Demographic information.**

1. What is your nationality?

2. What is your study area?

3. When are you supposed to graduate?

4. Where and in what role/industry/job do you plan to work after graduation?

**B.      Your perspectives about the future of higher education.**

1. What skills do you think universities will need to teach/develop in the future?

2.  How do you think universities should teach/develop such skills?

C.  *Current and future state and opportunities/problems of universities.*

1.  Identify the three most compelling problems that universities face today:

    a.  _____

    b.  _____

    c.  _____

2.  Identify the three most positive aspects of universities today:

    a.  _____

    b.  _____

    c.  _____

3.  To what extent do you agree with the following statements (tick one box per statement):

| # | Statement | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| 1 | Universities provide students with just the right skills they need to succeed in the workforce | | | | | |
| 2 | Universities make the learning experience entertaining and fun | | | | | |
| 3 | Universities manage to strike the right balance between teaching real-world skills and providing theoretical foundations | | | | | |

| # | Statement | | | | | |
|---|---|---|---|---|---|---|
| 4 | Universities provide practice-based learning opportunities | | | | | |
| 5 | Universities provide theory-based learning opportunities | | | | | |
| 6 | In 10 years, universities will look mostly the same as today | | | | | |
| 7 | In 20 years, universities will look mostly the same as today | | | | | |
| 8 | Other institutions are currently providing young people with more relevant learning opportunities than universities | | | | | |
| 9 | Universities provide enough internship opportunities | | | | | |
| 10 | Universities have the possibility to really influence young people's career path today | | | | | |
| 11 | Universities provide adequate job placement opportunities for students | | | | | |

**D.      Perceptions of your place in university.**

1. To what extent do you agree with the following statements (tick one box per statement):

| # | Statement | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| 1 | I feel involved in the activities promoted by my university | | | | | |
| 2 | I am at university because I need a piece of paper to find a job | | | | | |
| 3 | My grades are fundamental in my university experience | | | | | |
| 4 | I think students are the real customers of the university experience | | | | | |
| 5 | Students have the opportunity to have a say in how university services could be improved | | | | | |
| 6 | Universities would not even exist if there were no students | | | | | |
| 7 | I think I take full advantage from my university experience | | | | | |
| # | Statement | Never | Rarely | Some-times | Often | Always |
| 8 | I feel engaged in my university life | | | | | |

**E.      Perceptions of your place in the workforce.**

1. To what extent do you agree with the following statements (tick one box per statement):

| # | Statement | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| 1 | I am confident I am learning skills to be successful in the workplace | | | | | |

| 2 | I am studying for a job that will be my job for the next 10 years | | | | | |
| 3 | I think that the theoretical knowledge I am getting in my university will be relevant in the workplace | | | | | |
| 4 | I think that the practical knowledge I am getting in my university will be relevant in the workplace | | | | | |

### F.    Perceptions of family pressures.

1. To what extent do you agree with the following statements:

| # | Statement | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|-----------|-------------------|----------|---------|-------|----------------|
| 1 | My family had a strong role in my decision to go to university | | | | | |
| 2 | My family had a strong role in my decision to select my degree | | | | | |
| 3 | My family will have/had a role in my decision on the first job I will have/had after university | | | | | |
| 4 | Families should be further engaged in the university experience | | | | | |

## Appendix 2: Post-workshop survey

University/College/School
logos here

**The Future of Higher Education**

**Post-Workshop Survey**

**A.    Demographic information.**

1.  What is your nationality?

2.  What is your study area?

3.  When are you supposed to graduate?

**B.    Ideas and perceptions before and after the workshop.**

1.  To what extent do you agree with the following statements (tick one box per statement):

| # | Statement | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|-----------|-------------------|----------|---------|-------|----------------|
| 1 | The workshop on the future of higher education made me reflect on issues that I have never thought of before | | | | | |
| 2 | I think discussing these issues with my peers was a useful experience | | | | | |
| 3 | My vision of the university of the future has changed after the workshop | | | | | |

**C.    Ideas' interpretation.**

1.  To what extent do you agree with the following statements (tick one box per statement):

| # | Statement | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|-----------|-------------------|----------|---------|-------|----------------|
| 1 | During the workshop, I was able to understand the ideas on the university of the future that other students had | | | | | |
| 2 | I was surprised by some of the ideas that emerged in the workshop | | | | | |

2. The idea that I liked the most at the workshop was (describe idea and briefly explain why you liked it):

3. The idea that I liked the least at the workshop was (describe idea and briefly explain why you didn't like it):

D. **Other ideas from the day- ones that teams didn't come up with.**

1. I wish we had more time to develop one specific idea at the workshop (describe idea):

2. If I were the Ministry of Education and I had unlimited resources, I would further develop the following idea (describe it):

___

### E.     The 'impact' of the workshop method.

1. To what extent do you agree with the following statements (tick one box per statement):

| # | Statement | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|---|
| 1 | I had participated in a design-led workshop before | | | | | |
| 2 | I would like to participate in other design-led workshops on other topics in the future | | | | | |

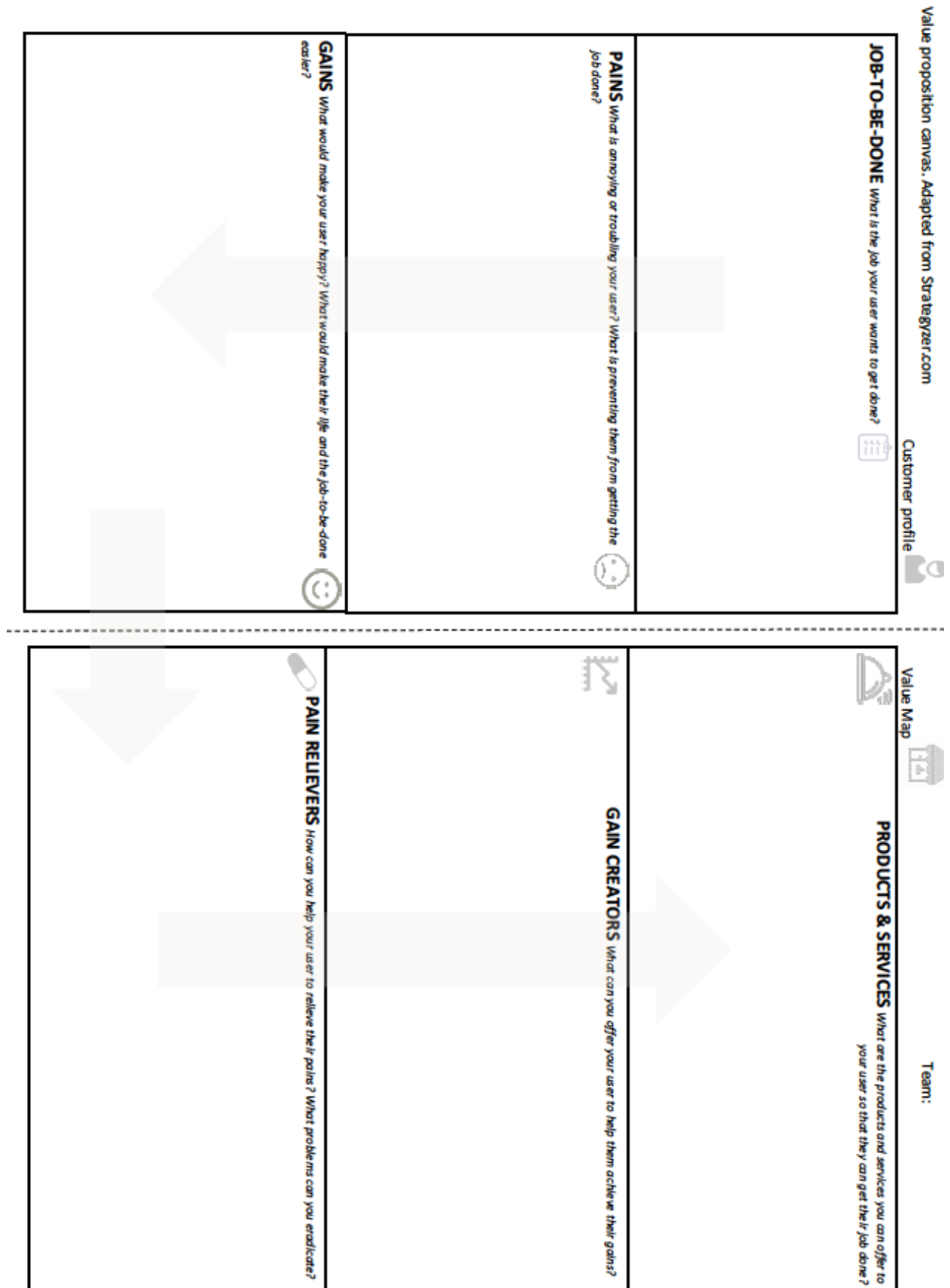### F.     Any final remarks about the workshop?

___

## Appendix 3: Persona Canvas

Persona canvas - Team:

### Demographics

Name:
Age:
Nationality:
Relationship status:
Degree (Bachelor, Master, MBA, etc.):
Area of study:

### Personal features

Career goal(s):
Hobbies:
Personality traits:
Interesting facts about him/her:

### Technographics

Apps mainly used:
What does he/she like about technology:
What does he/she dislike about technology:

### University experience

Main pains:
Main gains:
Feelings towards Higher Education:

## Appendix 4: Value Proposition Canvas

Value proposition canvas. Adapted from Strategyzer.com

Customer profile

**JOB-TO-BE-DONE** *What is the job your user wants to get done?*

**PAINS** *What is annoying or troubling your user? What is preventing them from getting the job done?*

**GAINS** *What would make your user happy? What would make their life and the job-to-be-done easier?*

Value Map

Team:

**PRODUCTS & SERVICES** *What are the products and services you can offer to your user so that they can get their job done?*

**GAIN CREATORS** *What can you offer your user to help them achieve their gains?*

**PAIN RELIEVERS** *How can you help your user to relieve their pains? What problems can you eradicate?*

## Appendix 5: Comments on the workshops

Qualitative feedback on the workshops (from the post-workshop survey, see Appendix 2, question F)

- excellent
- everything was great
- good. Thanks
- presenter was really good and interactive; lunch while working is a good idea
- Thank you for a fascinating and informative course.
- Very thoughtful
- amazing, interesting, highly participation; amazing researcher [lecturer name]
- interesting and amazing
- very interesting, very good food, very nice lecturer, definitely recommended
- Pretty good
- the workshop was amazing and useful
- good!
- great one! Taking each member together by brainstorming
- 8
- thank you!
- it was interesting - thanks!
- more activities and less lectures
- it is a great workshop, however the time is too long
- good, more activities
- develops creativity and team work; really participative activity!
- great structure, diverse group activities
- good excellent
- so good
- I really enjoyed the workshop, very engaging, good contents and delivery
- no
- interesting and I have a lot of fun thank you
- good!
- really interesting and well organised
- to give me some think about how to solve problems, good method and processes
- chance to take part in a really great workshop with a great instructor
- good, but due to time management some activities are ignored.
- great workshop
- I hope we can engage with everybody in the classroom
- 80/100
- 98 everything is OK
- [lecturer name] was explaining everything very well and clearly as well as in a timely manner.
- it was very interactive and informative. Enjoyed learning so much about design thinking and innovation. Taking back lots of great ideas.
- great host, great activities, overall fun and warming
- I am not satisfied at all thanks for your effort and good luck
- thank you