

Cultural Context and Service Design: developing critical and meaning-making capacity

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This paper reports on the experimental introduction of a socio-cultural lens to the design process, to aid in mapping symbolic aspects of consumption: i.e. users' expectations, aspirations and identification needs and the socio-cultural rules at play in the context of the innovation.

An action research intervention was implemented with design students to investigate how applied semiotics and cultural analysis methods support user research and meaning-making during the design process. Students were provided with theories, activities and templates to facilitate the exploration of global and local socio-cultural trends, positioning of innovation in the cultural category and mapping codes and other contextual socio-symbolic signifiers that influence users' preferences and choices. Results indicate that cultural context analysis contributes to build critical thinking skills and capacity in designers, and enables a wider awareness of the mediating role of design in the acceptance and diffusion of innovations.

keywords: cultural analysis; applied semiotics; meaning-making; service design

1. Introduction

Service Design, a rapidly growing area of professional User Experience Design is increasingly taught within Interaction Design and related programmes, as a user-centred approach to innovation that involves systemic thinking, and the design of multiple touchpoints between the service and the users. Service designers may be involved in concept generation, creating operational structures and a consolidated product-service system, but they also leverage the appeal and uptake of the innovation by creating intangible – or 'symbolic' – value using cultural references and narratives to make the



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innovation relevant and meaningful in its context. By 'framing' innovations with socio-symbolic referents, designers legitimise and position innovations as relevant and aspirational offers in the socio-cultural context where they are deployed.

However, it is argued that dealing with these meaning-making aspects stretches the traditional skills of the service designer beyond the technical and organisational aspects (utility and usability) into new dimensions such as the formulation of value propositions, and the translation of this offer into meaningful user experiences. Dealing with socio-cultural aspects requires building new capacities and skills in designers to ensure the innovation's relevance and appeal in the context where it will operate.

This research introduced methods from Applied Semiotics and Cultural Studies to support designers in mapping the socio-cultural rules at play in the innovation's context, in order to draw socio-symbolic 'design constraints'. Methods from these disciplines are being increasingly adopted in commercial contexts (e.g. in branding, product and service development) to enhance cultural resonance, overcome cultural barriers and facilitate market insertion and adoption.

2. Literature Review

Innovation uptake is largely dependent on the ability of the solution to improve users' quality of life through the offered (tangible or intangible) benefits (Norman & Verganti, 2014; Tukker, 2004). Thus, developing relevant and desirable innovations in a saturated market requires a sophisticated and deep understanding of users, and the socio-cultural factors that influence choice.

2.1 Cultural consumption and symbolic value

In a global consumer culture, brands establish a symbolic exchange through the meanings consumers attach to the brand name, logo, and product category. This symbolic meaning (desirability, identity and legitimacy) is not just a value added to the financial value of goods, but has material impact on financial markets themselves (Oswald, 2015).

Designers construct symbolic value by 'framing' artefacts. They create narratives that associate goods, services and brands with certain values, attributing identity and meanings to them by recalling existing cultural references or codes (du Gay et al., 2013). Thus, as 'cultural intermediaries' (Negus, 2002), play a central role in the production of symbolic value through all designed artefacts. Hence, design artefacts are affected by socio-economic settings, but also effect the legitimization of values, practices and identity.

2.2 Context and consequences

Cultural context plays a considerable role in the perceived value of innovations. To be perceived as relevant and desirable, products and services need to be rooted in the context where they will operate (Clatworthy, 2011; Crilly et al., 2004; Wong, 2004). This implies that the designer should be able to navigate the socio-cultural context, mapping existing offers, considering the user needs in light of such offers and identifying what aspects of the user needs can be met, or improved by innovation that are not currently met by existing offers.

Clatworthy (2012) points out that to build desirability in services it is necessary to incorporate 'details' from the innovation's context to the design: 'details that the user can perceive as belonging to their lifestyle, are coherent with the user's other lifestyle choices,

the way they think and the things that express their identity and who they are' (ibid, p. 85). Equally, Crilly et al. (2004) highlight the role that external visual references (or stimuli) play in influencing decision-making, paying attention to the personal, situational (contextual) and cultural factors that moderate user response. Therefore, appearance and experience are paramount when considering innovation adoption because they influence both *commercial success* and user's *quality-of-life* or subjective well-being (Crilly et al., 2004; Kahneman, 2012).

Furthermore, as 'taste creators' (Bourdieu, 2010), designers inevitably affect people's orientation towards certain goods as legitimate, worthy and desirable, playing a substantial role in the adoption of radical innovation, but also bear responsibilities as the effects and consequences of artefacts are political (Zingale, 2016). On one hand, design outputs stimulate people's imagination and satisfy wants and desires; on the other, people's social attributes are reconstructed under the impact of these outputs, which can lead to many new social and environmental problems. Tie et al. (2014) argue that 'in this process, designers as important conceivers and practitioners need to reflect upon their role, from the perspective of anthropology and sociology, and on the question of how to balance between the 'material needs of individuals' and the 'commonwealth of society' (p. 346).

In summary, understanding the socio-cultural landscape of innovation draws attention to consider the *appeal* and *orientation* generated by design, but also enables more responsible practice by raising awareness of the *consequences* the innovation bears for users and context.

2.3 Dealing with the socio-cultural dimension: design skills and capacities

Product and service system innovations are complex offerings whose design require the consideration of multiple aspects, such as technology, development actors, users and context (Morelli, 2002) – all equally involved in the definition of the final configuration. Morelli (2003) describes three different aspects as complimentary design dimensions: technical, organisational and socio-cultural domains (Figure 2).

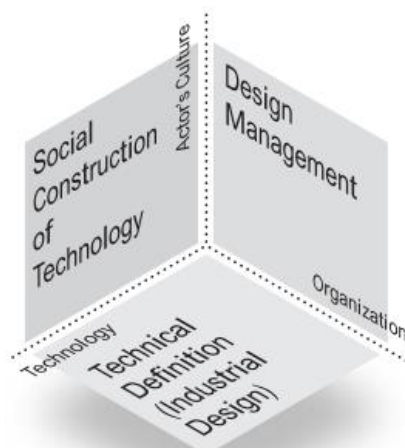


Figure 1 – Multi-dimensional values implied in service design activities (Morelli, 2003)

- The first domain refers to the *technical capabilities and skills* for developing innovative aspects of the product or touchpoint design.
- The second domain refers to the *ability for reorganising functions* around innovative patterns. Such a domain is close to the discipline of design management.
- The third domain (socio-cultural dimension) concerns the *ability to influence* innovation processes and *to determine the paradigmatic context* (meaning) in which new products and services can be accepted or refused.

Morelli argues that traditional design skills and capacities are strongly projected upon the technical and the organisational domains. However, ensuring contextual insertion is a critical part that determines the innovation's success (Norman & Verganti, 2014), and therefore, an understanding of socio-cultural referents is relevant to the development of service innovations because this often *enhances* or *limits* their potential acceptance and diffusion (Morelli, 2003; Zurlo & Cautela, 2014). Fulfilling this role successfully is highly dependent on the designer's capability to observe and interpret cultures, social needs and attitudes. Although this is an intrinsic characteristic to the design activity, support and capacity to perform these tasks during the design process needs developing, because innovation framing is mostly conducted in an intuitive manner (Kazmierczak, 2003).

2.4 Applied Semiotics

The application of semiotics to consumer insight and marketing is now a well-established, powerful complimentary methodology to conventional market research. Marketing semiotics experienced a sharp rise in influence with the growth of brand strategy and management since the 1990s, and particularly with the rise of megabrands requiring cross-cultural and global communication platforms (Evans & Shivakumar, 2010). Semiotics is employed in commercial contexts as a strategic tool set to elaborate sophisticated 'cultural insights'. Some benefits include the ability to create disruptive innovation by identifying emerging meanings and breaking the current normative codes; and foresight in identifying patterns of change in culture and anticipate trends. Semiotic research is employed as a strategy for mainstream diffusion of innovations, as it helps to identify emergent cultural themes (e.g. practices or trends) that have a strong likelihood of spreading into the dominant or mainstream culture (Evans, 2014).

The semiotic approach concentrates on uncovering 'naturalised' meanings which users are often unable to articulate, because these operate largely at subconscious level (Oswald, 2012). While many market research methods try to understand the user's preferences in isolation, semiotic methods acknowledge the individual's beliefs, preferences and behaviours conform or confront 'implicit' socially agreed rules expressed through social signifiers to mark status and belonging, and so forming 'in' and 'out' groups. In contrast to traditional market research, which gains insights mostly by consulting users directly (e.g. by means of interviews, focus groups and questionnaires), marketing semiotics draws insights from the study of *discourses* expressed via popular culture representations (media, advertising, music, film, etc.) by employing semiotic, cultural analysis and ethnographic methods (Oswald, 2012).

Evans (2014) reports a set of 'simplified' semiotic tools directed to improve brand communications, position new brands, products and services in the 'mainstream cultural landscape' and for radical product innovation (innovation that is not based on existing

customer needs). Figure 2 illustrates the typical ‘cultural landscape’ generally analysed for these purposes. Figure 3 illustrates Evans’ process, which comprises two main stages: Decoding (analysis) and Recoding (incorporating findings into design and communications).

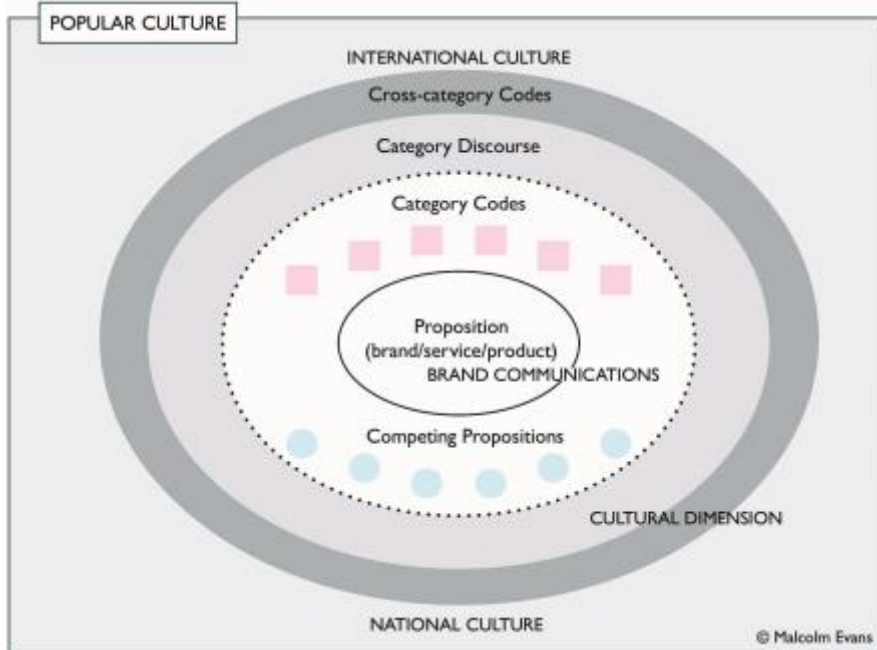


Figure 2 – Cultural context landscape (Evans, 2014)

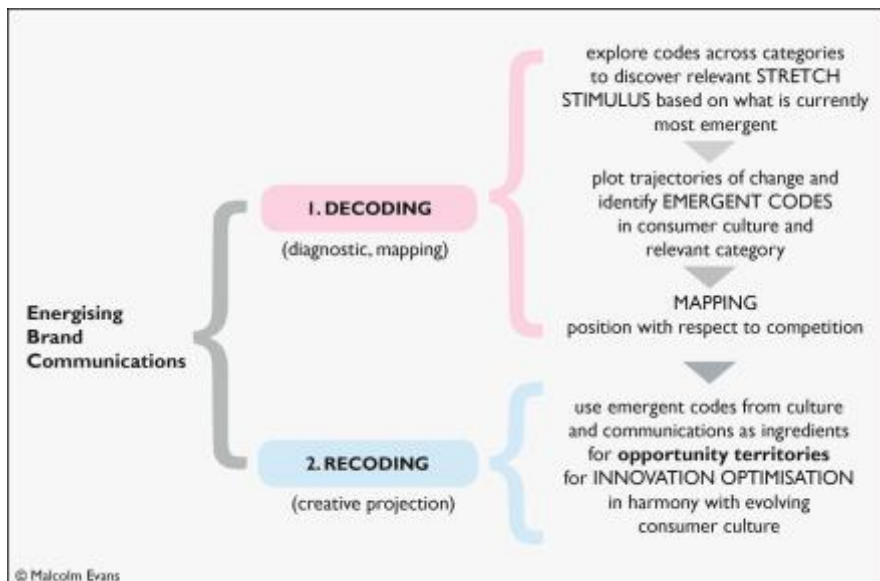


Figure 3 – Semiotic process adapted from Evans (2014)

This aesthetic-semiotic approach offers potential to equip designers to deal with socio-cultural aspects of innovation. Applied semiotics methods can support designers in

‘deconstructing’ the innovation context, and in the strategic selection of ‘cultural codes’ that can be incorporated by design to construct value propositions that are better rooted in its socio-cultural context, and therefore perceived as desirable and relevant. However, while these methods offer great potential to aid with this task, they are normally implemented by professional semioticians and market researchers – not designers. Therefore, the capabilities and requirements for their integration to the service design process needed to be empirically investigated.

3. Method

The intervention investigated how cultural analysis and applied semiotics could support socio-cultural context research during the design process, in order to generate more relevant service value propositions. Equally, it was sought to identify how teaching these methods could aid in developing critical analysis and meaning-making skills and capacities through design education.

3.1 Participants selection

To this end, the researcher implemented an action research intervention with MA Interaction Design and User Experience students, as part of the Service Design for Social Innovation course, designed to provide the student with practical experience and competence in service design from a bottom-up innovation perspective. Working in teams, students engage in a collaborative project to generate innovations based on a clients’ brief, which in this instance, was provided by a consortium of local authorities and businesses. The challenge was to make the town’s heritage more visible and invigorate the local tourism ‘offer’. The students in the cohort were from diverse cultural backgrounds.

3.2 Data collection and analysis techniques

The workshop and tutorial sessions were captured in **audio recordings** and **photographic records**. Feedback from students and tutors (about the intervention itself and other situational and contextual nuances) was collected through **semi-structured interviewing**. **Document analysis** (student’s log books and reflective accounts) were used to understand (in the context of their learning experience) students’ sense making of the tools and methods used. Transcripts of the sessions and interviews were **analysed thematically**. **Document analysis** of the module guide, students’ logbooks and reflective accounts was employed to obtain further insights. These were also **analysed thematically** and compared with data from the interviews and other feedback.

3.3 The AR Intervention

The researcher engaged with the students in the role of assistant tutor, once-weekly over a period of six consecutive weeks. The study design was based on Tripp’s (2005) four step model: Plan, Implement, Evaluate and Reflect (Figure 4).

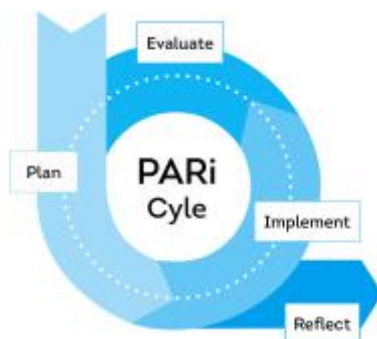


Figure 4 – Action research cycle

4. Process

4.1 Step 1 – Plan

Familiarise – The researcher familiarised with the module guide, the students and the learning environment by attending colleagues’ sessions and through informal conversations with the module leader.

Plan action – In agreement with the module leader, the intervention was planned as a workshop scheduled within the timetable, followed up with tutoring support (**Error! Reference source not found.**).

Table 1 – Intervention plan

| What | Why | How |
|--|---|---|
| a) Deliver Context and Sustainability workshop | To introduce to student’s theories, methods and tools for mapping the innovation’s context and organising research insights | Timetable in single session (3hs) Deliver theory and practical activities to reinforce concepts. Relate to learning outcomes and objectives |
| b) Follow up with tutoring | To support students in their learning of new skills and methods by providing guidance and examples | Attending tutorial and presentation sessions throughout the module |

4.2 Step 2 – Implement

At this step, intervention (action) and research activities related to data collection (practice-based, workshop, evaluation and feedback sessions) took place. The following sections report a narrated account of the *action* (who did what, when, where, how and why (Tripp, 2005). Data analysis and results are reported under Evaluation and Reflection steps.

4.2.1 The workshop

The workshop was scheduled at the start of the ‘Define’ phase of the design process, once the students had received the brief, conducted some field observations and had been introduced to service design principles, process and commonly used methods and tools. The session was delivered to the students in a single day, and structured in three parts:

Part 1 – Introduction

Contextualising – First, the relevance and benefits of conducting cultural context research within their module project were introduced, placing the methodology within the context of Service Design for Social Innovation (Figure 5).

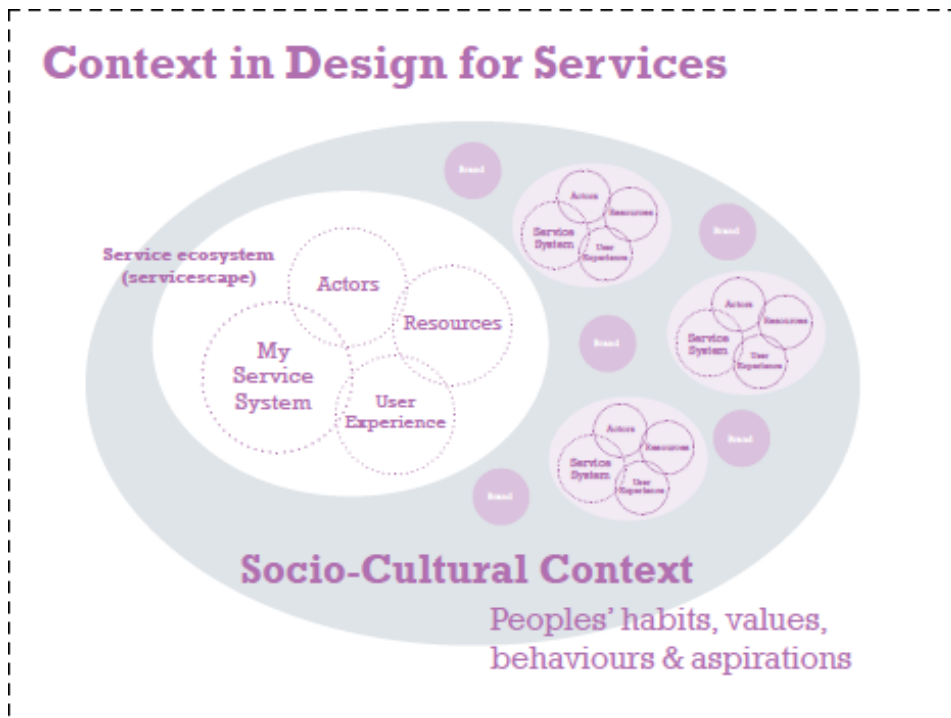


Figure 5 – Session introduction

Then, semiotic and cultural analysis methods were introduced as 'complementary' to existing methods for user research (Figure 6). The benefits of both approaches were highlighted and differentiated: while traditional methods allow us to obtain information from users more 'directly' and understand them 'on their own' (behavioural aspects), semiotic methods were presented as an 'indirect' method for spotting unconscious meanings and cultural conventions which users cannot easily articulate – a way of understanding users 'as social beings'.



Figure 6 – How semiotic methods compliment traditional user research.

Theory was delivered in the context of Design for Services (Figure 7), and followed by group activities and discussions to consolidate knowledge.

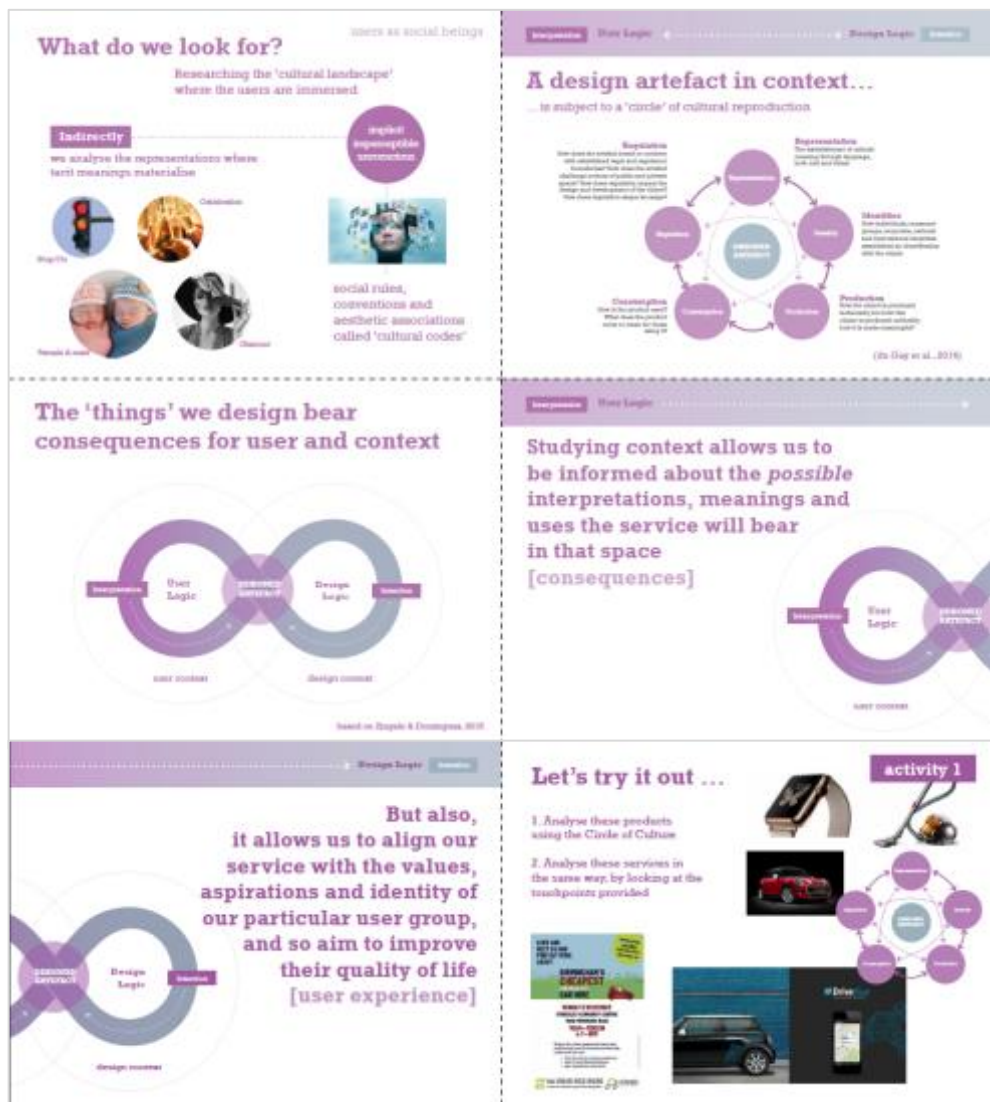


Figure 7 – Placing semiotic and cultural reproduction theories in the context of Design for Services

Activity 1 – Deconstructing Cultural Artefacts

The first activity consisted of carrying out two analyses: First, students were asked to conduct a 'cultural deconstruction' of a **product** using the Circuit of Culture (du Gay et al., 2013) as a guide for analysis (Figure 8). Each group was assigned a product: the Dyson vacuum, the Mini Cooper and the Apple watch (Figure 9). The products selected represent good examples of design that changed a category's meaning and achieved iconic status.

Circuit of Culture

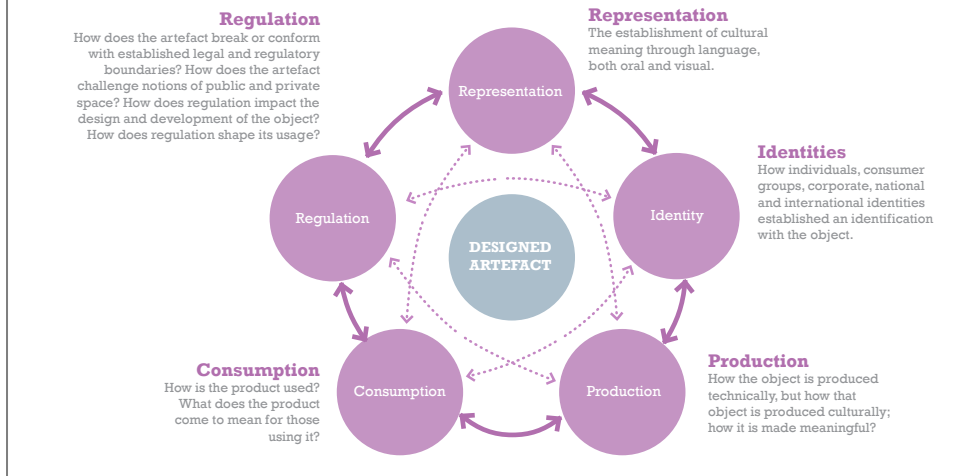


Figure 8 – The Circuit of Culture (du Gay et al., 2013)



Figure 9 – The products used for Activity 1, cultural analysis

Following this, students were asked to repeat the analysis, but this time the ‘texts’ provided were **service touchpoints** for car sharing systems Drive Now and Co-Wheels (Figure 10).



Figure 10 – Drive Now service touchpoints used as ‘text’ for analysis

Activity 2 – Innovation Feature Analysis

The second activity consisted in breaking down the service features into three main categories: Environmental, Functional and Symbolic features using an Innovation Feature Analysis template designed by the researcher (Figure 11). Two car sharing services were provided as cases for analysis (Drive Now, a private enterprise and Co-Wheels, a social enterprise).

| Innovation feature analysis | | |
|-------------------------------|--|--|
| Environmental Features | How is the innovation sustainable? | |
| Functional Features | <ul style="list-style-type: none"> • <input type="checkbox"/> What are the practical benefits that your innovation offers? • <input type="checkbox"/> Saves money • <input type="checkbox"/> Saves time • <input type="checkbox"/> Is more convenient than existing options... • <input type="checkbox"/> It works | |
| Symbolic Features | <ul style="list-style-type: none"> • <input type="checkbox"/> What sort of symbolic associations should your innovation convey? • <input type="checkbox"/> I feel connected • <input type="checkbox"/> I feel important • <input type="checkbox"/> I feel proud • <input type="checkbox"/> I feel knowledgeable • <input type="checkbox"/> I feel a hero • <input type="checkbox"/> I feel a winner • <input type="checkbox"/> I show that I care • <input type="checkbox"/> It's the cool thing to do • <input type="checkbox"/> It's fun • <input type="checkbox"/> I feel important • <input type="checkbox"/> I feel respected • <input type="checkbox"/> I feel I stand out from the crowd • <input type="checkbox"/> I feel worth it • <input type="checkbox"/> It makes me happy | |

Figure 11 – Feature analysis tool, provided to break down service features

For both activities students worked in small groups (Figure 12) and each activity was followed by open class discussion, to share and compare analysis results and reflect on what was being learned and why it was relevant to their projects.



Figure 12 – Students engage in critical analysis activity

Part 2 – Methods and Tools for Context Mapping

Once students became familiar with the concept of the 'cultural mediation of design' the researcher could introduce basic semiotic theory concepts and applied semiotic methods and tools (Figure 13).

Good morning ladies and gentlemen

Welcome.

Good morning ladies and gentlemen

Welcome.

Good morning ladies and gentlemen

Welcome.

Good morning ladies and gentlemen

Welcome.

+ What is semiotics?



semiotics
(/sɪm'iɒlətiks, -sɪm'i-/) n.

the study of signs and symbols and their use in communication

+ Signs, symbols and codes are our cultural 'software'



+ Applied or commercial semiotics

- Born in the 1980s in Europe
- More 'structural' and 'pragmatic' approaches
- Is used by large corporations and brands (complements traditional market research) for product innovation and brand positioning



Code mapping – Themes

Small our category themes



Positioning in culture

Youth culture brands positioning



Emergent codes

New meanings and themes, or old meanings played in new ways in popular culture



Figure 13 – Sample slides for introducing applied semiotics concepts and theories

Part 3 – Context Mapping for Your Project

Here, students were introduced to a case study that illustrated how the methods and tools could support them throughout the design process during their projects, and were provided with some templates to encourage them to use the methods for their projects (Figure 15 and 15).



Figure 14 – Tools for mapping trends and category analysis



Figure 15 – Code mapping case study and sample templates to aide context research

As the templates were experimental and did not provide detailed instructions for use, students were reassured that they would be supported and guided with tutorial sessions to help them make the most of their learning using these tools.

The students were given recommendations for recording the use of the templates in their personal 'log books' (Figure 16). A list of key bibliography was also provided for further independent learning.

What we expect you to do with your contextual map

- You need to improve it as your research progresses
- Use **Prezi.com** or **RealTimeBoard.com** to create an online version so you can all share and contribute
- You need to refer to it during ideation & prototyping, to ensure that
 - your service offer (value proposition) is in line with the user's values, aspirations and expectations.
 - your design representations (brand + touch points) speak the user's 'language'. If they don't, they will be out their 'radar'

Remember to note in your log books when, how and why you are using these tools.

Figure 16 – Recommendations and expectations for using the templates and building a contextual map

4.2.2 Follow up tutorial sessions

As planned, students were supported throughout the eight weeks that followed. The group tutorial sessions provided tutors and students the opportunity to revisit the concepts, methods and tools delivered during the workshop (Figure 17).



Figure 17 – Group tutorial session

Throughout these sessions, time was dedicated to each individual group to discuss progress, difficulties, ideas and provide guidance and support.

The researcher approached the group and asked a few generic questions to prompt conversations, took notes and offered guidance and advice as suitable. Within these discussions, certain specific methods and tools – either existing, or the researcher’s own – were recommended at different points of project development to support students with a specific problem or task (Figure 18).

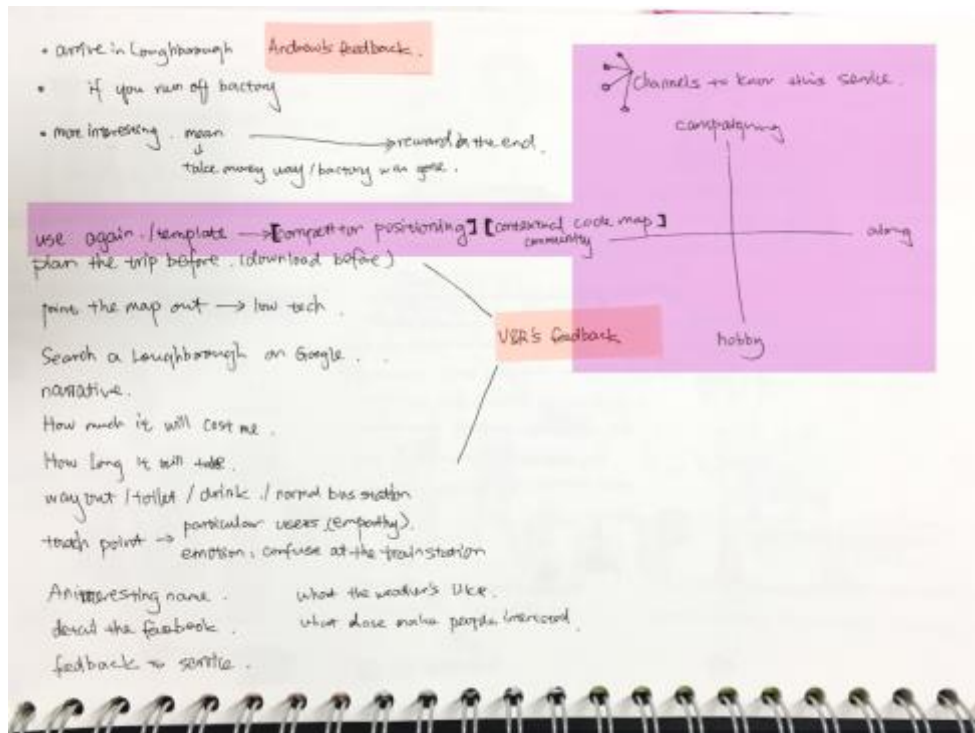


Figure 18 – Student log book notes on tutorial feedback

At Week 9 (end of Develop phase), it became apparent that the biggest problem most groups were facing was translating their service ‘descriptions’ into well-defined value propositions. To support the students overcome this barrier, the researcher developed a new aide (template) to help them crystalize their concept and formulate the value proposition more succinctly and accurately (Figure 19).

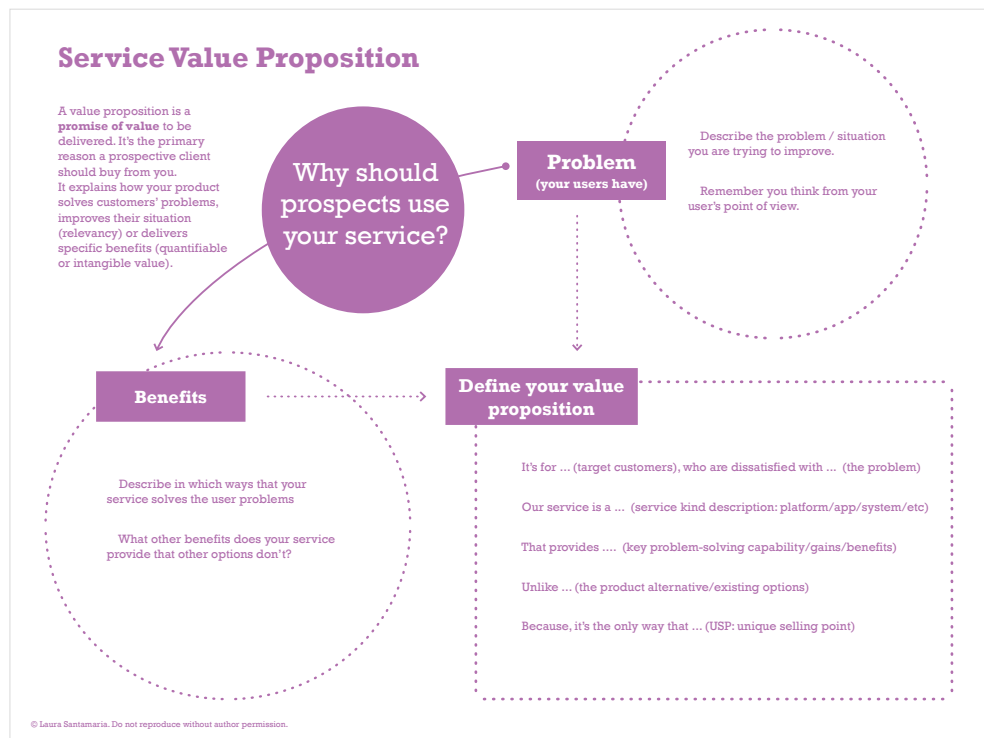


Figure 19 – Service Value Proposition template developed by the researcher

This tool was based on the ‘pains and gains’ existing method, which is widely implemented in user-centred research to analyse and describe customer experiences. To these two basic concepts, a third dimension was incorporated, to aid the definition and articulation of the value proposition as a coherent and relevant statement that synthesises the service into a sort of ‘elevator pitch’.

The intervention ended at Week 12 of the course, once the students delivered the project assignments.

4.3 Step 3 – Evaluate

In line with action research principles, the evaluation step consisted of an assessment of progress prompted from reflection on ‘change of practice’ (Kemmis & McTaggart, 2003). Progress – or research results – were evaluated by reflecting on how the *research* and *action* objectives agreed at the Planning (Step 1) were met.

The *action* objective for this intervention was to enable students with theories, methods and tools for researching and analysing the innovation’s context, and making sense of their findings. This objective was met by: 1. Introducing students to cultural analysis and semiotics theories in the context of Design for Social Innovation education; 2. Analysing how these were used, to better understand how they support the innovation process and contribute to build designers’ skills and capacity for socio-cultural context research, meaning-making and framing practices.

1. Dissemination of knowledge – how was it passed on and received?

Feedback on the workshop content, format and timing was collected by interviewing all student groups (4), two weeks after the workshop. The interviews revealed the following:

- **Content and delivery format**

In general terms, the workshop content was well received; students asked questions throughout the session, they were interested, engaged and participative.

'I think I'd definitely encourage a lot more workshop content.'

However, most of them struggled with the activities which were hard for them to do by themselves, and needed the tutor's support to further understand and elaborate. It was evident that most of them have never attempted this mode of analysis and were struggling to think critically and 'denaturalise' meanings.

'Every time you come to our table were able to make sense of everything, yeah. We had make use of you coming to our table ... it helps a lot.'

'I guess, to be honest, it was a bit confusing at first, maybe because we were sitting at the back, but ... overall I think the tools were quite useful...'

It must also be noted that the students that struggled the most with the 'cultural deconstruction' activities lacked the cultural background to interpret the meanings of the samples provided for analysis (e.g. Dyson vacuum and Mini Cooper car). The students that did have this cultural context information understood the activity more quickly and were better able to tackle the analysis without much help from the tutor.

- **Timing**

All theory, methods and tools were presented at once in the session, although it was assumed by the researcher that some of them would not appear relevant or useful at that point in the process. Students expressed:

'I think that going back and revisiting once we have a stronger idea or direction will be very beneficial.'

Hence, as already planned, tutorial sessions provided opportunity to revisit concepts and support students with guidance as to which tools and methods could support them at different stages of the design process, why and how.

2. Use of knowledge – how did the tools and methods support students' design process?

Students' log books evidence differences in the use and internalisation of the methods and tools. **Error! Reference source not found.** summarises the analysis showing *which* methods were used most and least (Frequency), *how* they were used (as a working or presenting tool), whether visual representations were employed (Visual Ref) and whether the tools were used in the format provided by the researcher or adapted by the students to suit (Fix or Adapted).

Table 2 – Students’ use of methods and tools, as evidenced by their log books’ analysis

| ID | Method/Template | Frequency (4/4) | How is it used? | Visual Ref (4/4) | Fixed or adapted? |
|----|--|-----------------|-----------------|------------------|-------------------|
| 1 | Global Trends Mapping | 4 | Both | 1/4 | Fixed |
| 2 | Global to Local Take | 4 | Both | 1/4 | Fixed |
| 7 | User Personas | 4 | Both | 2 | Both |
| 8 | Value Proposition Definition | 4 | Both | 0 | Both |
| 9 | Contextual Code Map | 2 | Both | 2 | Fixed |
| 6 | Exploring potential user groups (paradigm) | 2 | Both | 1 | Both |
| 4 | Market positioning (competitors) | 1 | Summary | 1/4 | Adapted |
| 3 | Offer definition (paradigm) | 1 | Process | 0 | Fixed |
| 5 | Category positioning | 0 | - | - | - |
| 10 | RDE (Residual, dominant and emergent meanings) | 0 | - | - | - |

- **Frequency**

All groups used the ‘Global Trends Mapping’ and ‘Global to Local Take’ methods to summarise research around the ‘trends in tourism’ in contemporary society, and how that is manifested in the geographical context of innovation. These tools are well-suited to the late Discovery phase of the process, and supported students by structuring their exploration at these two levels, helping them to understand the general characteristics of the service category.

User personas and the Service Value Proposition methods were also used by all groups. These were strongly encouraged by tutors, as the relationship between them constitutes the foundational basis of user-centred innovation. The user personas were elaborated and represented differently, with various degrees of complexity between groups. The Value Proposition elaboration is discussed in more detail in the next section.

Some groups (2/4) used the Code Map and Category Positioning, while no groups used the RDE analysis, Offer Definition (binary oppositions) and Sub-category positioning. This was expected as, with exception of the Offer Definition, these are expected to support later stages of the process (Development and Delivery) touchpoint design, brand and communications development, which fall outside of the project scope for this assignment.

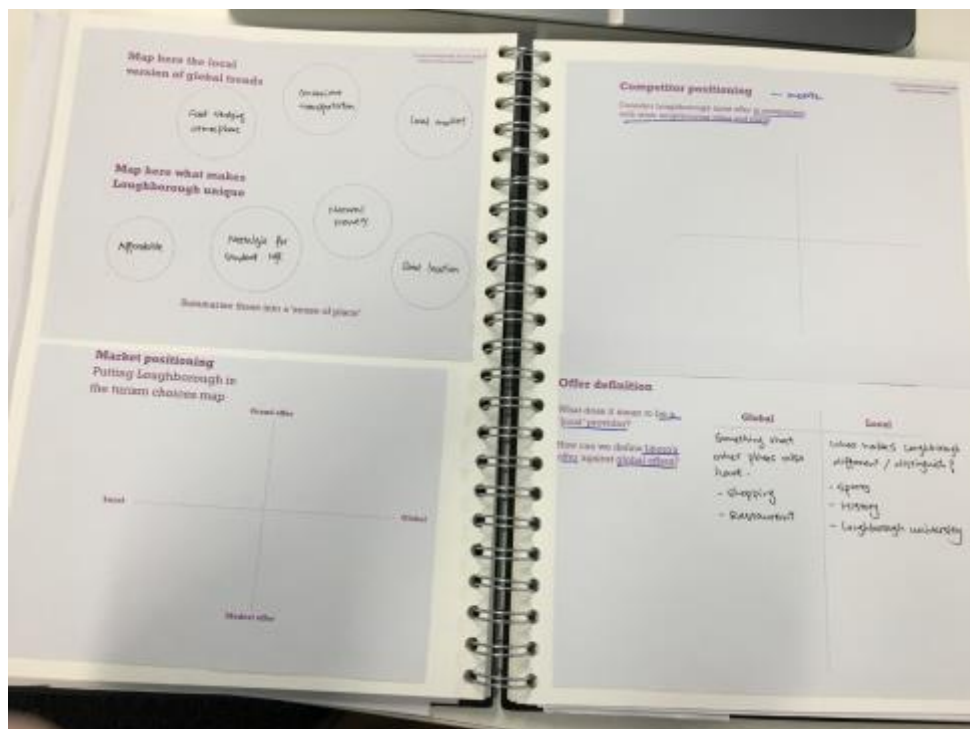


Figure 20 – Poorly completed templates

Modes of use

While some students used the methods and templates as aides to focus and summarise their research activities **throughout** the process (Figure 21), others used them **retrospectively** to make sense of their development journey and communicating it to an audience (Figure 22). When used throughout the project, templates were annotated in **written** form or using sticky notes (Figure 21), **visual** representations of concepts were employed by those using them retrospectively.

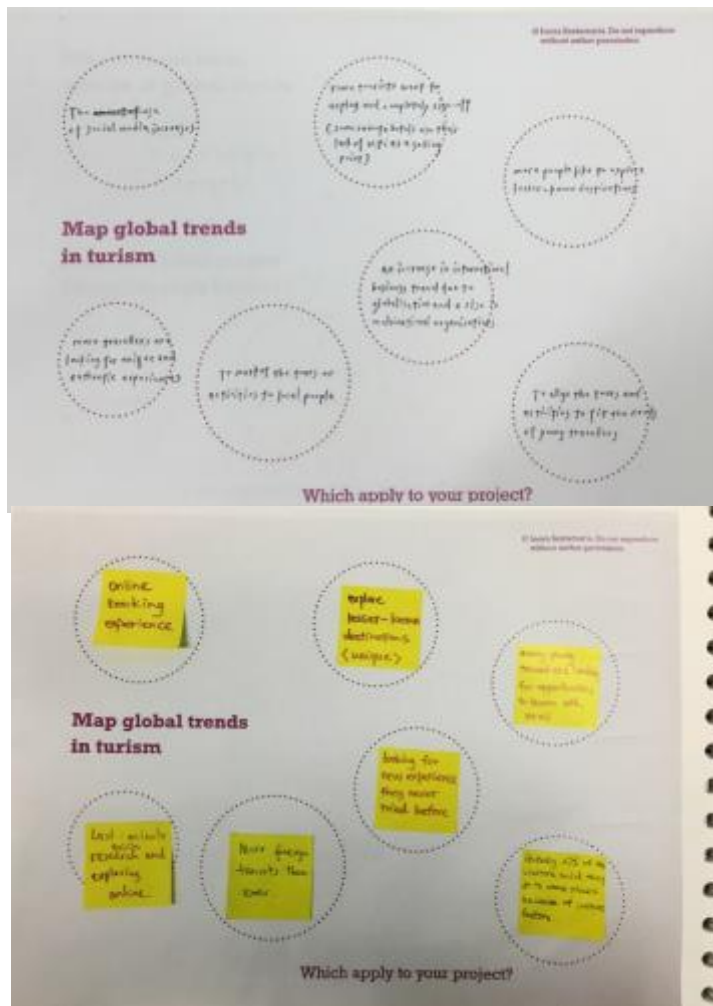


Figure 21 – Templates used as working tools

Two groups out of four used the templates in both ways (to aid the process and to summarise and present their findings). This demonstrates that some students (perhaps those who understood how to make best use of the methods) found them useful to **structure their research phase, summarise their findings and present insights to others in a coherent, logical way**. This, in turn, meant that because students were better equipped to correlate design decisions to the research data, they were also in a stronger position to argue in favour of their design proposals.



Figure 22 – Global trends template used as visualisations

Impact over the value proposition

The 'Discovery' phase of the design process closes with a summary of insights upon which decisions are made to 'Define' a first concept and target users. This requires the translation of insights into clearly defined value propositions. Therefore, value proposition definition is a strong pre-requisite to progressing the service innovation onto the 'Development' phase.

In general terms, students had produced long, technical descriptions of the service that lacked emotional appeal and/or were not distinctive, or subtle enough to be differentiated from existing options.

At this point, the Service Value Proposition (SVP) tool was introduced (Figure 23), and all groups employed it to various degrees of success in delivering what was expected – i.e. succinct, clear and well-targeted statements (Figure 24).

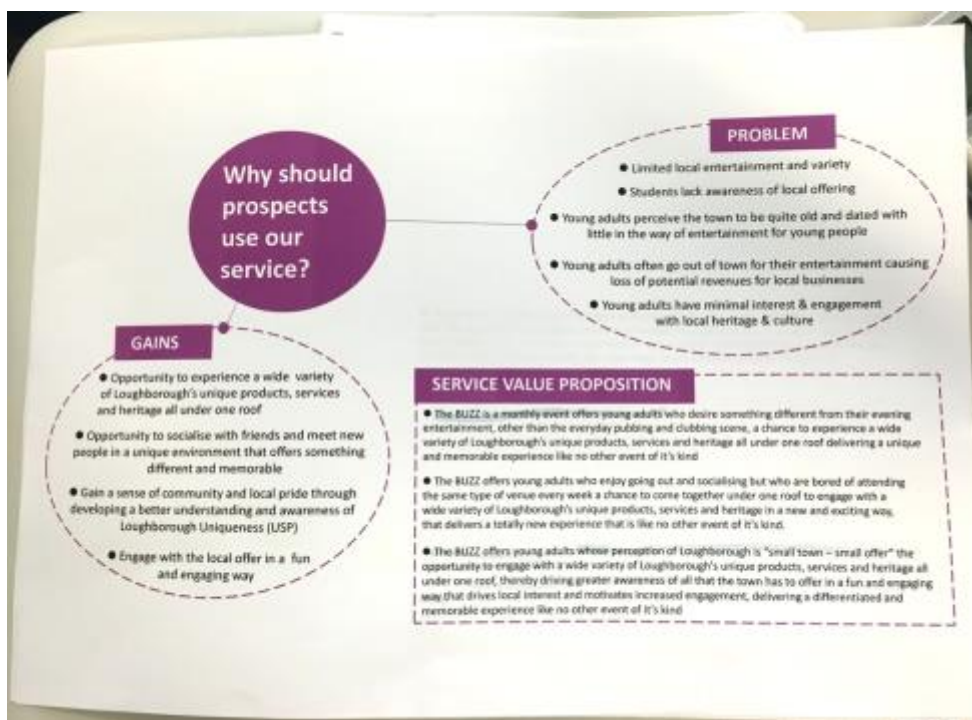


Figure 23 – Example of student's use of the SVP tool

• The BUZZ is a monthly event that offers young adults who enjoy going out and socialising a totally new way to sample the products, service and heritage of Loughborough, creating an opportunity to come together under one roof to experience all that is unique about Loughborough's in a new and exciting way, that delivers a totally new experience that is like no other event of it's kind.

Figure 24 – Formulated value proposition sample

Defining value propositions is quite challenging for designers (Valencia, Mugge, Schoormans, & Schifferstein, 2015), and there seems to be a lack of tools and methods to support designers in this crucial task. The value of the methods to support value proposition framing was evidenced:

- It helped students research the context by providing a structure and strategy to organise design research
- Research findings were better articulated and more consciously linked to their design proposals
- The elaboration of value propositions was informed by a strong exploration of users and context, and understood as a clear output of the design process

3. Situating the activities within the ‘Double Diamond’ design process

Upon analysing how the students used the theory and practical methods provided by the researcher, the different activities proposed were situated within the innovation process as illustrated in Table 3.

Table 3 – Templates grouping according to design process stage

| Purpose | ID | Method/Template | Value | Process stage |
|--|----|--|---|--|
| GLOBAL Innovation context exploration | 1 | Global Trends Mapping | Inform service offer | DEFINE |
| | 2 | Global to Local Take | Mapping cultural | Immerse in |
| | 3 | Offer definition (paradigm) | landscape, users (as social beings), competitors and allies to elaborate service positioning within context | context |
| | 4 | Market positioning (competitors) | | Frame problem |
| | 5 | Category positioning (themes) | | Empathise |
| | 6 | Sub-category positioning | | |
| | 8 | Service Value Proposition | Define offer | Value Proposition |
| LOCAL Mapping references for representation | 7 | Personas Lifestyle (visual mapping) | Inform design | DEVELOP |
| | 9 | Contextual Code Map | Mapping symbolic aspects (values, aspirations and aesthetics), for adopting a semio-aesthetic approach to design rooted in the user’s culture and context | Branding, communication and prototypes |
| | 10 | RDE (Residual, dominant and emergent meanings) | | |

4.4 Step 4 – Reflect

In line with the research paradigm, a multi-perspective approach to reflection was adopted. Reflection was undertaken by researcher recording own accounts on both the action and the research, in order to learn from own practice by self-reflection (Schön, 1991). Opportunities were provided to gather participants' reflections during and after the intervention.

Researchers' reflections

The analysis of students' log books and the researchers' notes (taken throughout the tutorial sessions), revealed the following points:

- Students tend to jump to conclusions or ideas too early in the process, without a full understanding of the problems/situation they are trying to address
- Some might sit stubbornly with first concepts and avoid exploring beyond the obvious
- They face difficulties in structuring, analysing and drawing insights from research. In general terms, they:
 - Struggled and lacked methods to draw insights at a deeper level, and to summarise and cluster findings
 - They kept arriving at insights from the same (simplistic) angle, and avoided problematising. This is manifested as a repetition (going around in circles) in terms of insights, offer definition and user benefits, rather than progression of learning throughout the process that shows their expanding understanding.
 - Struggled to differentiate between user needs and service benefits

These points indicate that, in general terms, students find it difficult to grasp the workings of user-centred approaches to design. Therefore, mentoring and support throughout the process of 'learning by doing' is key for developing such capacity and skills. Time is short and it is necessary to develop educational activities which are more experiential, for students to grasp difficult concepts, given the time and information overload pressures. That left little opportunity to reflect and discuss social and sustainability aspects of the students' proposals. In future, it could perhaps be beneficial to provide opportunities to analyse and discuss the outcomes as a group, to help build criticality and self-reflexion. For example, introducing a session post assessment to reflect together on outcomes and learning experience in relation to learning objectives could improve their own individual reflection and consolidate learning.

The discussions could reflect on how their service propositions contribute to societal sustainability and well-being, what values are legitimised and what assumptions of power relations are embedded in these concepts. The service Feature Analysis tool (Figure 15) used during the cultural decoding activities conducted in the workshop session could be a simple way to structure and prompt such discussions in the classroom.

Students' reflection

- The knowledge was helpful approach to organise design research and make sense of findings

The content of the workshop appeared as new knowledge to most design students, who found the session helpful and illuminating, especially in terms of how to approach context exploration, organise research strategy and elaborate findings:

'you taught us how to approach our research, and that is the important thing we learned in your workshop. Actually, for example how we can do analysis of our research and to express what we find.'

'A framework ... to be able to explore.'

'It's a good way to help us organise our thoughts and generate ideas.'

This is further evidenced by the student's use of the methods as discussed previously. Although the students were presented with many methods and tools alongside the ones provided by the researcher, they seem to have enjoyed being introduced to a wide, rather than little variety of them (Figure 25).

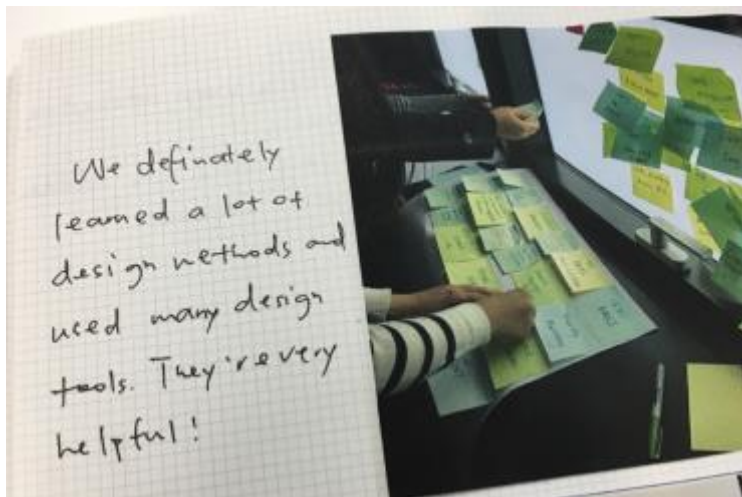


Figure 25 – Student's diary comment on tools

They also appreciated analysis methods in particular,

'...there's not actually that much in the way of analysis methods and the more data we have, actually the more confusing it becomes.'

Some students' diaries also show evidence of use of theoretical concepts explored during the workshop, e.g. to recall 'Semiotic decoding' to map contextual aesthetic codes (Figure 26).

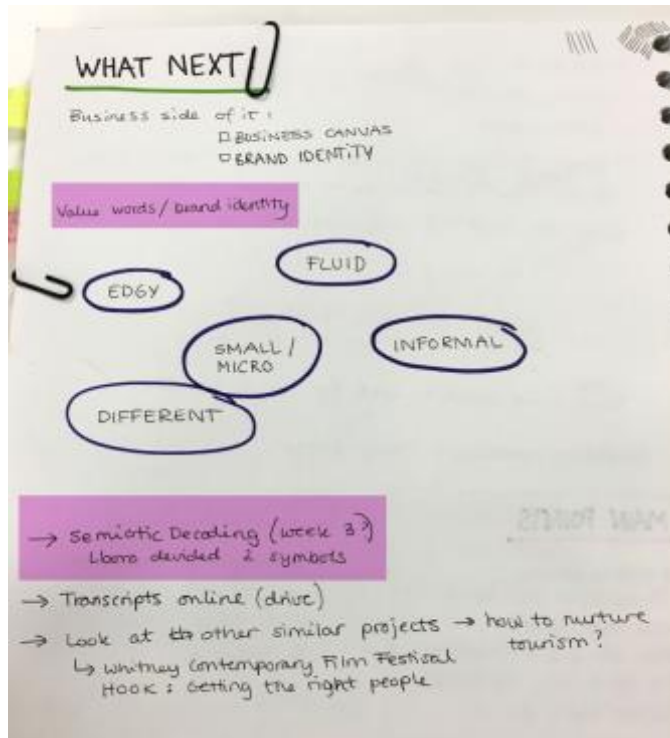


Figure 26 – Evidence of recalling knowledge disseminated at the workshop

Tutors' reflection

The tutors welcomed the theories and methods introduced as valuable to build students' critical and inquiring capacities and skills.

'... what we've seen more distinctly is that they have been more critical about pinning down what the problem is, what the offerings are, etc.' (C)

'We need to reinforce somehow even more strongly to go out and look as you were saying to them: "You are designing into this context, this is the market, go there, take photos, you're gonna report back with these next week"' (V)

They also suggested to introduce the methods earlier in the course timetable the following year, which evidences their recognition of the value of this approach to structure and organise the design research stage.

'[...] if we bring your methods earlier and maybe they do that with more time, and see whether we see more of an impact [on their outputs]' (C)

The SVP definition was deemed one the most useful tools by tutor (V), who encouraged students to use it again for the same purpose, in a different course:

'That tool [SVP] I pointed them to use it if for their major project because, they are following the double diamond framework, and then when they two of them overlap in the middle, there they should have a clear vision of

who their target users are, what needs or what problems they have that could be met by your future service' (V)

In summary, the tutor's assessment was found consistent with students' views and the researcher's observations in that this approach helps to:

- Organise the design research phase, drawing and summarising insights, which contributes to build students' critical and analytical skills and capacity
- Elaborate and define the value proposition by grounding it on strong insights

As discussed in section 2.3, these are critical capacities necessary to deal with meaning making and framing practices in design. Therefore, this intervention contributed towards bridging this gap.

5. Discussion and Conclusions

The research objective for this study was to expose students to cultural analysis and applied semiotics theories to deal with socio-cultural context research in the context of service design for social innovation.

By comparing data collected through three different methods (researcher notes, the students' logbooks analysis and tutors' feedback), it was found that the areas where students needed most support were:

1. Learning to immerse themselves in context, organise and analyse insights critically

The results of this intervention confirm that students enjoy workshops and working with tools and templates, and these are deemed suitable to support the development of new skills and capacities while 'learning by doing'. In this, the study highlighted the need to develop designers' ability to recognise and use a wider variety of methods for design research, especially a better use of ethnography and other meaning-making and context situating methods that enable students to build empathy with users, and to 'immerse' in the context – e.g. by de-naturalising, strange-making, enacting and experiencing in order to elicit intangible aspects of user and context.

2. Being critical and questioning the literal, and their own assumptions throughout the process

An important aspect highlighted by this study is the need to develop stronger capacity and methods for reflexivity and criticality, both of design practice and the consequences of design actions and outputs. Desirability of artefacts is an effect of meaning (Beckett, 2013), and is intrinsically linked to culture, values and their representation in social discourses. Introducing theories of cultural reproduction and 'cultural deconstruction' activities can prepare design students to understand the central role that design occupies, and consider the dimension in which design influences society by manipulating, reproducing and legitimising cultural meanings.

Framing and meaning-making imply the study of meaning, especially how meaning is formed and interpreted. Incorporating basic knowledge from cognitive science, semiotics and communication theories as a part of a designer's education will prove invaluable in this regard. Whilst practical skills are, of course, vital to a designer's

education, it is also important that a design student gets an understanding of what design does and how it does it.

3. Defining service concepts into competitive, contextually relevant value propositions

Formulating value propositions and maintaining coherence of user experience is a challenging task for designers (Diehl & Christiaans, 2015; Valencia et al., 2014). The value proposition poses a bargaining scenario between two parts: *providers* who invite the *users* to take part in an exchange of value and benefits (Morelli, 2003).

Deconstructing and mapping the cultural landscape of the innovation can help designers to consider how the aesthetic, semantic and symbolic aspects influence and affect user's interpretation of what the artefact is, how it should be used and what it says about the user. Design constraints can be drawn by producing a 'map' of stimuli that could help to anticipate, at least in part, user appeal and response, as well as keeping designers' own preferences and tastes on check.

4. Making sense of what is being designed and for what purpose

The research also poses some interesting questions with regards to the ethics and design direction. The purposes for which design tools should be used – as with any form of knowledge – often rests on the moral values and ethical responsibilities upheld by practitioners. Design values are acquired and must be nurtured (Manzini, 2015). In this, it is responsibility of the educator not only to pass the knowledge, but provide guidelines for students to be self-reflective and critical about their own practice, and to find their own moral compass. For example, teaching the new knowledge generated by this research in the context of Service Design for Social Innovation reveals a clear intention from the educators.

To conclude, the aim of the investigation was to support designers to deal with socio-cultural and symbolic dimensions during the design process. This Action Research intervention investigated how the semiotic and cultural analysis theories and methods could support designers in this task. These initial results indicate that the methods provide good support for meaning-making aspects of innovation (generation of relevant value propositions and meaningful user experiences), and contribute to build criticality and reflexivity in designers' research and practice.

5.1 Implications for Design Education

Designers equipped with traditional skills and training operate confidently in the technical and organisational dimensions of service design. Generally speaking, they find no problems in elaborating 'tangible' benefits for all stakeholders. However, traditional skills and capacities do not equip designers for the elaboration of meaning, or 'intangible' and socio-symbolic benefits – and these are key to align the service with context and users' ideals of value, an aspect that is intrinsically linked to desirability.

It is evident that the canonical, linear, causal, and instrumental model is no longer adequate to describe the complexity of the design process. Consequently, the archetypical curriculum for design education (the three-part art/science/technology structure) needs to be updated. Findeli (2001) proposes a new model with a three-part structure that comprises *perception* (visual intelligence), *action* (a moral act) and aesthetics logic, arguing

that visual intelligence, ethical sensibility and aesthetic intuition should be developed and strengthened throughout the whole course, forming the 'basics' of design education.

Congruently, the implementation of the socio-cultural lens suggested in this study contributes to the development of such skills, awareness and capacities in students in the following:

- Understanding that **the primary object of design in service innovation is concerned with meaning- and sense-making**, the result of which is the interplay of organisational, technical and socio-symbolic dimensions.
- **Meaning-making is an intrinsic activity in sustainable service design that makes use of cultural resources.** Critical analysis methods such as the ones used in this study offer a good basis to tackle these aspects more methodically, and it ready to be applied within existing design research and service design process.
- Cultural deconstruction activities and methods **support the development of critical and analytical capacity, as well as 'cultural literacy' through deconstruction of cultural myths, preconceptions.** This raises designers, awareness of the influence their output bears in culture, as well as the factors that drive their own design practice and activity.

5.2 Limitations and recommendations for further research

The application of this socio-cultural lens in the design process evidenced the strength of applied semiotics to aid in structuring design research, and prompting students to note global and local trends, cultural myths, and mapping social signifiers. However, it is difficult to determine precisely how the intervention alone influenced the design and value proposition *outputs*, given that students used this knowledge in combination with other tools and methods. Time assigned to activities also posed a challenging limitation to the quality of results that can be obtained through this type of analysis. Although applied semiotics methods show a promising approach to support the development of meaning making capacities in students, results are bound to a single case study and further iterations in other education contexts (e.g. other universities, related discipline students) are required to assert value in this respect.

The templates developed by the researcher to support the implementation of the cultural analysis activities helped to spark discussions, structure exploration and summarise findings. However, these materials were experimental and would benefit from further development to make them fit for stand-alone use (e.g. develop a framework/toolkit with instructions). Today's fast-paced education environment requires imaginative and experiential ways to deliver 'hard to grasp' theories and concepts such as semiotics. In this respect, the materials would benefit from further development aiming to create more immersive, performative and empathic learning experiences.

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