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ReThinkingDesign**

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Developing Service Design teaching within a Product Design Programme.

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Summary

In discussing the development of service design within the product design programme at Glasgow School of Art, this paper aims to highlight key areas of commonality between product and service design and the parallel skills that can be applied to both. During this process, we have had to consider how we talk about design in a service context and to begin the process of developing a common framework for a service design language within the department.

The value of design is discussed in the generation of visual aids for engaging user-groups and to communicate research information and analysis, generate insights and spot opportunities. It is also proposed that clients benefit from being presented with visually rich progress reviews and service propositions, and that they are provided with tools to promote the service proposals within their organisation.

It is hoped that by pointing out some of the lessons we learned along the way, other organisations may see ways in which they can adopt a more visual approach to working with service design.

Teaching Service Design within a Product Design programme

Service design and product design may not, at first glance, appear to be compatible disciplines, however, we have found them to be not only compatible but also symbiotic. One discipline can benefit from and enhance the other. More and more products cannot exist without a service supporting them and services are often facilitated by the use of, and interaction with, products. Moreover, the skills required for a user-centred approach to product design are not too far removed from those required to design services. Product design is after all more than the design of artefacts; it includes the experience of using them. It does not, therefore, take very long to recognise that the interaction with products and the service that the product supports also plays a major part in the user experience. If the relationships between product, interaction and service are mismatched then a poor user experience will result.

Recognising the need

More than ten years ago the product design department at Glasgow School of Art recognised that the field of product design was evolving. No longer was it sufficient to produce students that were simply good at designing aesthetically engaging and functional products. As a result, social science topics were introduced to further develop students' investigative and research skills as well as their understanding of the social and user context within which their designs might exist. Interaction and product design complement each other easily and the newly acquired social science skills enhanced the appropriate integration of interaction and product design.

More recently, the shape of manufacturing has been changing in the UK and with it the role of the product designer. It was becoming necessary to be aware of social and political influences on the design process and also how the design process can, in turn, affect the social and political strategies of industry. Many of our product design graduates found themselves developing strategies for designing products, or designing services rather than designing actual products. It was necessary for us to respond to this new market for our graduates and equip them with the appropriate range of skills and knowledge.

Culture Shift or Reframe?

Would incorporating service design within a product design curriculum require a culture shift? At first, many thought this to be the case, but as we considered the nature of what we were teaching it was recognised that, rather than a cultural shift, what was required was a reframing of the question "what are we designing?"

Our insight was that we are not designing products, interactions or services but that we are designing *experiences*. Here at Glasgow School of Art we recognised that product design is more than designing artefacts and that artefacts are integral to the experience we have while interacting with them. Product design is greater than the sum of form, function, aesthetics, and semantics; we interact with and experience products at a number of levels. We might observe the aesthetics of a product and be pleased by it, or use a product and understand its

function through the form, semantics and interface and have a pleasurable experience by using it. We can interact with a product that is passive and use it like a tool, or we can have a dialogue with an interactive product through its interface. A product may be supported by a service (e.g. mobile phone and network service provider) to provide functionality or it may act as a portal to, or facilitate, a service (e.g. self-service airline check-in). Whichever way we interact with products and services they are elements in a spectrum of needs, requirements, promises, and provisions that form the way we experience these interactions. It is therefore more appropriate to consider the design of the user experience than to design a product, interaction or service in isolation.

Design for Experience

The user is at the centre of their spectrum of experience; much like looking at a rainbow. Similarly when watching a rainbow, as you move your position the rainbow appears to move also - but it still looks to you like the same rainbow. The user perceives the overall experience from *their* centre, rather than seeing the various elements that make it up. Each rainbow is unique to an observer and similarly each user will experience a product, interaction or service in his or her own unique way.

Figure 1 - Designing for experience spectrum

Moving your point-of-perspective retains the sense of the user experience *rainbow*, but might emphasise a different balance of project outcomes that contribute to that user experience - a service, interaction, product outcome.

Redefining the product design course philosophy as "designing for experience," rather than a variation of what was traditionally recognised as product design, allowed project outcomes to respond to briefs in a more appropriate manner. If it was found from initial user-centred research that the most appropriate response was a service, then the students could develop aspects of the service design. Alternatively, the same is true for an interaction design or product outcome. It is the most *appropriate* response that is important. This is quite a mature response to a project brief, and one that is difficult to demand of students at the beginning of their design career. We therefore had to introduce a variety of skills, methods and ways of thinking to facilitate students tackling the spectrum of projects from service to product.

Developing the language of service design

Product design students are familiar with the vocabulary and terms used in design, but it was recognised early on, when discussing service projects with clients, that they had to adapt the language used as well as their visualisation and communication skills. The skills, in themselves, were not necessarily new to the design students, but the way that they were employed was. There are parallels between the process employed in designing services and in product design, however the way a service design project is researched, visualised and presented tends be a bit different. Also, the project outcome can be a non-physical one rather than a physical product.

Recognising parallel skills

Traditionally product design students are expected to observe people using products and produce designs that respond appropriately to who the user is, how they will use the product, where it will be used and for what purpose. The design should consider the aesthetics, materials and structure of the product and we should understand how to interact with it through the semantics of the interface. The skills employed by a product designer are generally observational research; analysis of the problem in the context of the research; visualisation of the problem through ideation sketching and generation of concepts; testing ideas by making models; refining and resolving the design based on manufacturing and user requirements. These skills with a few adjustments can be applied to service design, as equally as to product design - it is the methodology of applying the skills that change. When we work in our own discipline, it is sometimes difficult to see the parallels with another until the dividers are taken down. Our design programme aims to show students that there are no *real* differences and allows them to develop their own *flavour* of approach to a design problem.

Service designers have to be equipped to communicate clearly a complicated system of relationships and interactions between the various users and stakeholders. As part of the product design programme at GSA, the students are taught the social science skills required to engage in appropriate user research, investigate relationships, generate insights and make sense of complex data. The students develop interview techniques and visualisation tools to communicate complex information in simple and easily digestible formats in order to engage user groups and service providers in productive dialogues.

There is nothing like being exposed to real situations to learn quickly, so for the past two academic years we have worked with Skills Development Scotland on service design projects that look at various elements of their service provision to the public. Skills Development Scotland (SDS) was created in 2007 to deliver on the vision set out in the Scottish Government's skills strategy 'Skills for Scotland' by being a catalyst for real and positive change in Scotland's skills performance. The students were given project briefs requiring them to deliver service propositions that would help Skills Development Scotland develop a new, coherent and integrated service from the four distinct organisations and service provisions that were amalgamated to create SDS.

The need for group working

Service design projects are often complex and deal with a number of different user groups, service providers and stakeholders. It therefore makes sense to work in groups to help share the workload. This is perhaps the first major difference for product design students where they might have, in the past, worked individually on their design. The ability to work in teams; to share, negotiate, resolve and communicate ideas within the group is an important skill that the students are required to develop. The downside is that academic assessment of each individual's contribution becomes more difficult with group work, however it is a more realistic situation to an actual working environment.

Research methods

It was recognised that research methods and skills used in the field of social sciences could be adopted to enhance the observational research skills of the design students. These methods would help them engage more usefully with user groups and enable them to extract the key data and insights that might inform their later design proposals. The design of tools and methods of engagement with user groups is important at this stage. Previous commonly used tools, such as questionnaires are not always appropriate; they are difficult to write well; are time-consuming and fine for quantitative data but generally not good at capturing rich qualitative information. The tools used should be tailored to the people you are talking to and to the type of information required. Also, it is not always appropriate to use 'generic' tools generated from previous projects.

Figure 2 – User engagement tools


Interpreting the data

Having gathered copious amounts of data from users, service providers and other stakeholders, sense has to be made of the information. The ability to map user comments and research in a way that is quick and easy to visualise helps decisions to be made quickly, for insights to be generated and opinions to be formed.

Figure 3 - Working with the data visually
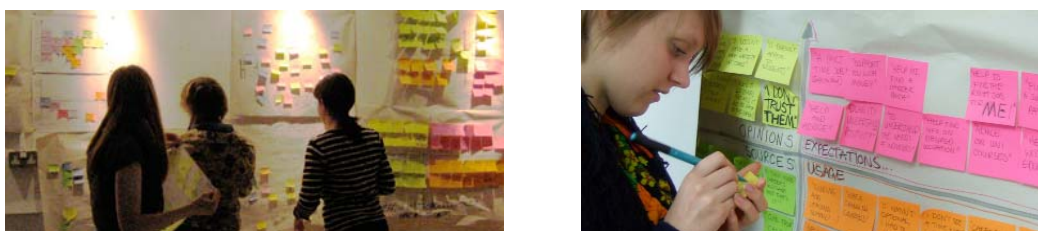
The various users' experiences of a service are mapped as journeys through time and should highlight the points of interaction and areas where there are problems, etc. The maps identifying the points in space and time where service and users interact (touchpoints),

Figure 4 – Mapping the user journeys
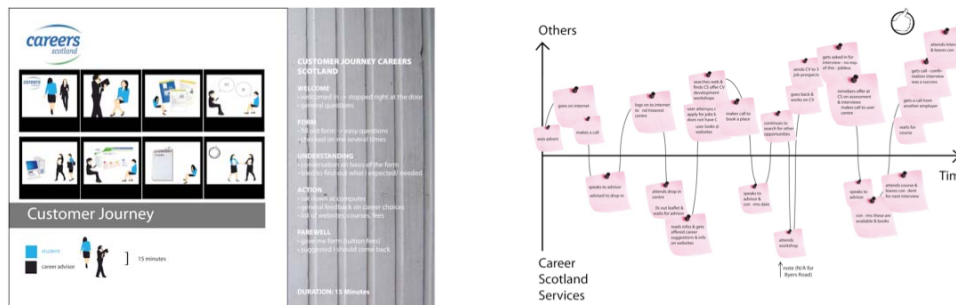

Designing for multiple interactions and relationships

Services might deliver a *simple* outcome – a telephone conversation, a train journey, etc. – but the relationships and interactions between the various stakeholders are typically quite complex. Product designers are familiar with generating user profiles from market information, interviews and observations. They recognise opportunities for a design solution and communicate those concepts through storyboards and product visualisations. On service design projects, the same skills are applied but the nature of what is being visualised is less *material* and illustrates more the interactions, experiences and relationships involved in the service. The techniques of communication therefore become more schematic or diagrammatic - illustrating systems of interactions and relationships rather than renderings of form.

Figure 5 – Mapping interactions & relationships

One area that we found differs markedly between product and service design is the use of user personas. A persona is likely to be used in product design to represent the profiles of a typical user group, however in service design we also have to deal with multiple and interacting personas. We also have to consider alternative methods of access to a service for different personas, or alternative journeys through a service. This indicated a need to design tools that offered ways of investigating and communicating these different pathways, interactions and relationships. The students used these tools to explore concept ideas and to refine their understanding of elements of the service.

Figure 6 – Illustrating user pathways and stakeholder relationships
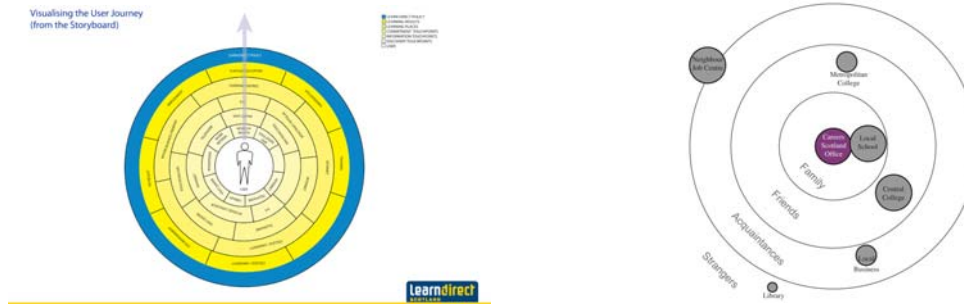
Developing service design proposals

Making sense of the research gathered is one thing, but it has to be used to generate proposals for a new service provision. Turning the analysis from what we know about the current situation, to what should be done to improve it. The design tools developed in the early stages prove invaluable at this stage to help create 'what ifs' – what if this or that relationship was changed; what if we rephrased the problems and opportunities as user desires and expectations, etc. Following analysis of the research, the students would focus on key areas from which to create service propositions.

The analysis was presented to the client in the form of a critique of the current, or proposed, service with insights into problems that exist and opportunities for improvement (design interventions). Does the service offering perceived by the provider match with the experience of their user groups? Does it match the users' desires and requirements? The insights generated and opportunities identified at this point form the basis of the service design proposal - if the service provision looked like 'X' then 'Y' could use the service to do 'Z'. To test the proposals, elements of the service propositions are prototyped and tried out on user groups to assess and refine the design.

Figure 7 – User group assessment and feedback of service prototypes

Communicating the outcome

Being presented with a voluminous report does not encourage ease of comprehension and dissemination of the contents within the client's organisation. The written meaning of the document can often be misinterpreted, or requires lengthy explanations to avoid it. There is nothing better than to be shown how something looks or works – it aids not only comprehension but also, and perhaps more importantly, it triggers awareness of how it can be implemented by each stakeholder and how it might fit into the organisation. By presenting the service proposals visually, the client can imagine how elements of the proposal might be used, or modified if necessary, to suit their needs. The client be inspired

by elements of the proposal or select what they need. The important thing is that the client feels empowered to act on the ideas presented rather than being dictated to.

To this end, the students present their service proposals as visual examples of what could be. User-provider scenarios are created; videos of a typical user journey are produced; web pages and graphics are mocked up; diagrams of user and stakeholder relationships are generated. The physical tools generated are also provided to the client to be used by them to explore their use with colleagues. All this serves to provide examples of what the service provision might look like and how it might be implemented. The client is provided with a proposal and visual aids that help communicate to colleagues the directions that can be taken to achieve the goals set by the original brief.

Conclusions

From our experience of developing a service design element to the product design programme we have seen the value that visually trained and user-centred designers can bring to the discipline of service design. However, these students also have to be trained in the use of user research techniques and social science methods to produce meaningful service proposals. The students' understanding of the user-service relationships in a social context combined with their ability to visualise potential solutions makes for a valuable combination.

The importance of generating specific tools with which to engage user groups was found to be invaluable and helped create dialogues with user groups that might have been difficult using regular interview techniques. Not only did these tools help visualise the discussion with users, but they also helped the communication of the finding later.

Visualising the findings at various stages using storyboards, relationship maps, diagrams, etc., was important to share thoughts and ideas amongst the designers as well as to easily present these ideas to the client for updates on progress. Creating visual representations of the data gathered helped generate insights and expose opportunities.

Presenting the service proposals in a visual manner through illustration of user-service relationships, storyboards of user journeys, prototypes of graphics, web sites and touchpoints, etc., provides the client with a proposal that is easy to digest and disseminate. The clients are provided with visual aids with which to generate ownership of the proposals within their organisation.

Acknowledgements