

Research in Practice

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Key Words: Accessibility, Sustainability, Iteration

Proposed question for independent inquiry: what are the influences of sustainability, accessibility, and iteration on designs?

There are many words I could use to describe my practice and the way that I work. I use a wide range of materials and methods to manufacture the pieces that I create, all of which vary depending on what I am making, and the finish that I want to achieve. There are some key words which are important in my practice, which influence the way that I work. These are: accessibility, sustainability, and iterations. These are the key words which influence and inspire me when I design and create all my pieces.



Figure 1: An example of accessible design (UX Planet, 2019)

The first keyword I use as a part of my practice is accessibility. It is defined as 'being easy to use or obtain' (Colins Dictionary) and is important as having products which all users are able to understand and operate is a key part of my practice as it means that anyone will be able to use my products, so I

would have a wider audience who are more likely to use the products I create. A key part of design is accessibility, as a lot of products don't take into consideration the varied needs of consumers, who fall into many different groups and ability levels. The most common groups which need accessibility considerations are those who suffer with disabilities, and so need adaptations made as a result of that. Furthermore, as society as a whole, we are living for longer (Office for National Statistics, 2020) which means that products need to be more conscientious of the fact that there are slowly changing needs that will result of this.

As Don Norman (2019) says, 'the world seems to be designed against the elderly', this shows that current design is not accessible and so an awareness is needed of this, across the design industry. If I, as a designer, can encourage more of a conversation/awareness around accessibility, then I will have been successful in creating better design for greater accessibility. In addition, I can use my designs to help improve accessibility. These changes may take time, but they will be able to help improve accessibility and create a better environment for everyone. However, this change is not something that I would be able to make by myself, or something that any designer can improve on an individual level, increasing accessibility is something that every designer, no matter what scale they are working on, needs to work on to improve the accessibility. If every designer steps up and creates a more accessible design, through either modification to existing pieces or a complete redesign of their products.



Figure 2: The scooter for life, by Priestman Goode (Priestman Goode, 2020)

Some designers and companies are slowly making the improvements and changes that are needed in order to create a more accessible society. An example of this is the Scooter for Life, by Priestman Goode. This has been developed as a prototype and has not actually been manufactured as an actual product yet. However, this prototype has the potential to create great change within the design community. This design was a part of an exhibition, which looks at and explores 'the potential for design to enhance the experience of our later lives and how design can help people lead fuller, healthier and more rewarding lives in an ageing society' (Priestman Goode, 2020). This design is created with the intention of improving the life of the elderly by encouraging them to remain active despite the increasing age. This prototype has managed to improve accessibility, as it has provided a way for people to retain their mobility even in their older age.

Accessibility is a key part of my practice, and it has also influenced some of the products that I have created. The main projects where I focused on accessibility are an Exoskeleton for a sufferer of Spinal Muscular Atrophy, and also a device which improved the mobility of people who are wheelchair bound. Both of these projects were focused on the accessibility and ensuring that the user was able to retain their independence and mean that they are not reliant upon anyone else. Furthermore, my designs are focused on accessibility because I believe that it is important for people to be able to remain independent and have their freedom, despite any limitations that there may be on their mobility, and through creating these designs I am able to create and allow greater accessibility.

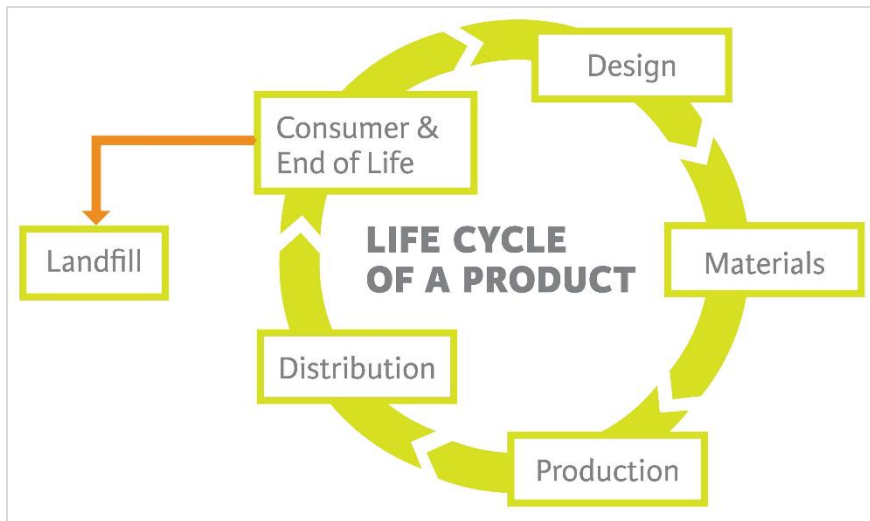


Figure 3: The sustainable life cycle of products (Ethics in Graphic Design, undated)

The second keyword I use as a part of my practice is sustainability. It is defined as ‘ability to be maintained at a certain rate or level’ (Fuad-Luke, 2009, p340) and having products which are sustainable is important as there are many growing concerns over the future of products and materials, their disposal, and also the future of the planet as a whole. This is also a consideration that I need to make, as consumers are becoming more concerned about their impact, and the waste that is created based on the products that they are using. There is no specific group which I should design for with greater consideration, as most groups are conscious of their impact and want to do as much as they can to mitigate and reduce the impacts. Furthermore, there is often an expectation that designers and manufacturers will ensure there is minimal environmental impact, and consumers will have little to do in order to minimise their impact.

As many have discussed, ‘Design for sustainability is no longer a future prospect, it is already underway in thousands of projects around the world’ (Walker, Giard and Walker, 2013, p.2). This shows that sustainable design has been under consideration for a long time, and designers are actively working to create more sustainable products, which reduce their environmental impact. In addition, this shows that designers have an awareness of the changes that need to take place, as design for sustainability has been a long considered issue, so designers have an awareness of the

changes that need to be made. Sustainability is underway in many projects, as designers often have a clear set of directions which they need to follow, and so these can also help to create more sustainability through the directions which they have to follow.



Figure 4: The Peepoo bag, designed by the Peepoole company (Dezeen, 2009)

There are many companies that are improving and changing in order to increase their sustainability. One of these products is the Peepoo bag, which has been designed by a group of Swedish designers, from the Peepoole company (Peepoole, undated). This has been developed as a sustainable way to prevent water contaminations, especially in the developing countries. This bag is sustainable as it is made from a form of biodegradable plastic, which has a urea inner, and decomposes within 2-4 weeks of disposal (Mcnerney, 2021). This is a sustainable product, as it has minimal environmental impact, and the product is all returned back to the ground after the product has been finished with and disposed of. This is also sustainable as it has ensured that there is minimal waste created, which means that there is less material impact as a majority of the material is used. This creates sustainability, as there is efficient use of materials, and manufacture, and so means that there is minimal waste and environmental impact.

Sustainability is also a key part of my practice, possibly more so than accessibility. This has also had an influence on the projects which I have created and made me rethink the sustainability of my designs. In all my projects, I have tried to make sure that I am fully considering all impacts for each part of my project, no matter how small they are. This is because, by making the effort to be more sustainable now, it will become second nature to me in the future, and so will mean that all designs will have sustainability considered. In addition, sustainability is important in my products as I will be able to consider all the materials which are being used, and also, I am able to consider the waste that I will generate through using the materials. By making sure that I am considerate of the materials I use and the way that they can be disposed of, I am able to make sure that any products that I create are sustainable and have minimal environmental impact.

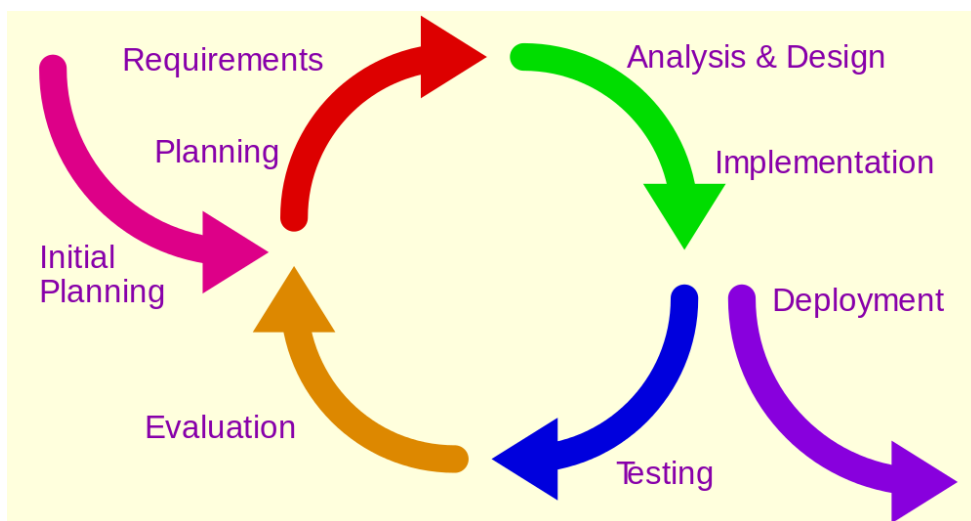


Figure 5: The cycle of iteration (Interaction Design Foundation, 2021)

The final keyword I use as a part of my practice is iteration. It is defined as ‘a new version of a piece of software/computer hardware’ (Colins Dictionary). However, iteration also means the slight modification and adaptation of ideas. This is an important part of my designs as a lot of the work is making small changes to ensure that the final product is created to the best standard possible. This is a key part of design, as many designs go through modifications, and changes before being manufactured and then sold. Some of these iterations may be unnoticeable to consumers, as they are small and often save the manufacture money by reducing the amount of materials that are used.

There is not one specific group that benefits from iteration, as the reduced cost of manufacture will be passed onto the consumer and so the product purchase price will be cheaper. In addition, iteration allows designers to pass on ideas and test different ways to create and manufacture the products.

Many designers would agree that 'Iteration has positive effects, such as enabling progressive generation of knowledge, enabling concurrency, and integrating necessary changes' (Wynn and Eckert, 2016. p15). This shows that iteration can be beneficial as it allows designers to share their skills and create better products through this sharing of skills. As a designer, iteration allows me to test my ideas and see the potential viability of the different design, in terms of both manufacture and useability. Iteration also means that the changes are able to be explored and added, and so more effective designs are able to be created. These iterations and change may take time to complete, but the designs and their resulting changes mean that the designs are more suitable for the target group, and so there is the potential that more sales would occur as a result. Furthermore, iterations mean that the products are better designed to fit the needs of the users, and so will be more successful.



Figure 6: The development of the iPod (Super Heuristics, 2019)

A lot of designers and companies already focus on iteration and improvements. One of the most well-known examples, is the iteration that Apple have completed on their iPods. The iPod has been through many changes and evolutions 'from an original slim mP3 player with a very small screen to a

tiny square touch-screen version to a longer, thinner touch screen version' (Your dictionary, undated). These iterations have allowed the iPod to become much more efficient and sleeker in design. In addition, these iterations have resulted in more efficient and powerful devices. These designs were all different variations and iterations of the same device, where the main aim is to discover 'the perfect combination of features that will please customers and provide the desired services in the right package' (Your dictionary, undated). Through this, Apple are aiming to create the most effective and efficient version of their product, which fits their users needs, but also manages to create the most efficient and easily manufactured product in order to benefit both users and manufactures.

Iteration is a key idea in my practice, I feel that it is probably the most important part of designing. I feel that it is also a key part of the way that I design and think about designs. Iteration influences me and the products I have created, especially as it is a key way for designing and considering the potential developments that could be created in each piece. This has been an influence on many projects, as I am able to create multiple sketches and models in order to explore the way that various models would work in order to explore the best way to create a product. Furthermore, iteration gives more freedom to create as many designs as possible, before narrowing the ideas down to a single specific part or feature, in order to create the best and most efficient version of each product.

These key words have led to the question which I want to write about next year, as I am exploring the impact and link between accessibility, sustainability, and iteration. I believe there is a link between the three, especially as accessibility can be improved through using and creating iterations and developing the product. Furthermore, this has led to my research question, as I believe that each of these aspects is critical for designers to consider, as they are all increasing in importance, especially sustainability and accessibility, which consumers are placing higher importance on. The consumers are also becoming more aware of their impacts and so are looking to buy sustainable

products, which in turn means that designers are also designing in a more sustainable and environmentally conscious way.

This move towards greater sustainability has the potential to create many new and innovative products and designs, which has the potential to result in the creation of many new products.

Additionally, a greater focus on sustainability means that there are more iterations being created, 'in order to get ever closer to a desired result' (Your dictionary, undated), this increased amount of innovation is a key part of my research, as I believe that it can result in a greater amount of development in the future. The focus on sustainability is a key part of my question, as not only is it an issue which is growing in awareness and is also something which designers have a lot of influence. Designers can use their power in order to ensure that there are changes in place which ensure sustainability is enforced and a greater awareness is achieved.

Accessibility is another a key feature of my question for next year. This is because many designers do not think about the importance of accessibility and the way they can create more accessible designs. Furthermore, design for accessibility is going to become even more important in the future, as 'people are also living longer, healthier lives' (Office for National Statistics, 2020). This means that designers need to be aware of the implications of some of their designs, and the fact that the design or product might not be as suitable as they were expecting it to be.

This is my research question and the sub questions that I could use. My main question is: what are the influences of sustainability, accessibility, and iteration on designs? I could break this down into several sub-questions. These include: the impact of sustainability on future design, the potential for design changes to accommodate accessibility, and the importance of iteration when designing.

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