

What is the role of a designer or maker in the 21st century
and how might that change over the next ten years?

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Introduction

The role of a designer in the 21st century is to design and make products or services that are innovative and consider the needs and wants of a given client. To achieve this modern-day designers, follow a design process which is used across a range of specialisms including Product Design and Industrial Design.

There is a traditional design process and a new design process called 'the iterative design process' which are both used in their own right respectively. The amount of time spent at each stage of the process can vary but typically the majority of the time will be targeting the modelling and development stages. The time spent on particular stages can also be down to a number of reasons such as the complexity of the problem being researched, the scope of the project, resources available and even user testing and feedback.

Designers follow the design process with the view to create a product that has been researched, analysed, tested and refined to ensure that the outcome is successful and has minimal flaws.

These design processes have developed in the modern day and are now being rolled out into other sectors including education and industry. Developing skills at an early age will allow future designers to have the skillset to solve problems and design solutions to given problems.

In schools across Wales there is a new curriculum that is aiming to inspire and engage the modern learner, this framework is called 'successful futures'. "The title of the report, Successful Futures, signals the vital importance of schools to the future success and well-being of every child and young person in Wales and to the country as a whole." (Donaldson, 2015, p.3). Within design and technology the framework is promoting the iterative design process

and the concept that failure is part of the design process and to continually refine and improve ideas just like household names such as James Dyson. Combining the study of modern designers and the iterative design process should promote the development of new enthusiastic and informed designers for the 21st century.

Traditional Design Process

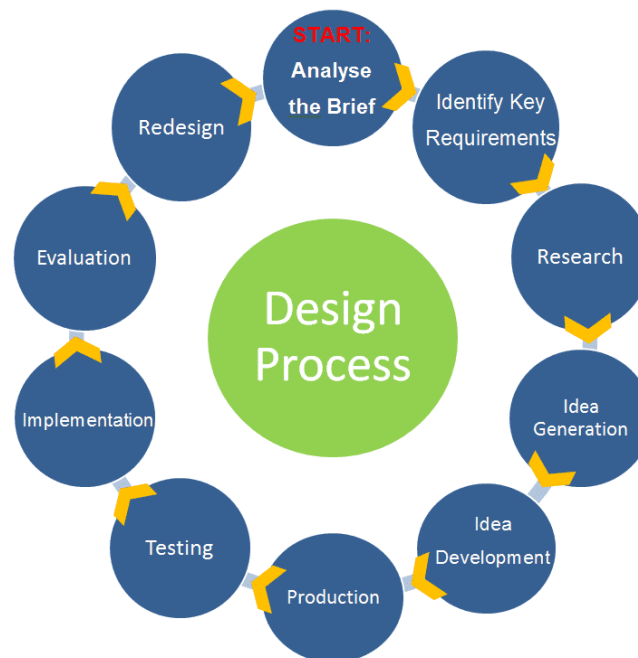


Fig 1. Design Process Diagram (Opus, 2016)

Firstly, to have a successful project while following the traditional process a designer must start by analysing the design brief. Designers use a design brief to give the guidance and focus by outlining the goals, objectives and vision during the initial stages and the outcome of a project. A design brief will include important details such as considerations for the project and also constraints. Well-crafted design briefs are broad and have open endings encouraging creativity from the designer while still being specific enough for guidance.

Designers need to ensure that they keep up to date with the latest trends in the market.

This involves rigorous research into industry trends and consumer desires as the trends and desires can change frequently leaving certain design behind as it become obsolete and no longer desirable by the consumer.

Designers will then identify key requirements after unpacking a brief. This is done to ensure that the final outcome meets the client's needs and expectations. Defining key requirements allows the designer to have more guidance based on their understanding of the client's vision. The next stage links in as a designer carry out research based on these key features that have been identified. The research is thorough and is focused on understanding the users' needs. This can be carried out in a number of ways such as observing the users' experiences through an ethnography.

Idea generation and idea development is where modelling comes into play with the traditional process however, it is also where the main issue lays with this style of process. Over the years designers such as James Dyson have found that creating a cycle between modelling and testing develops a more complete outcome. Dyson's design process is iterative and non-linear and Dyson is a strong believer that a designer learns more from failure rather than success. "Successes teach you nothing. Failures teach you everything" (Dyson, 2003, p.24). This change made to the design process by designers such as Dyson caused products to become more refined and plays a major part in why the new design process is being taught in schools. Models are made to display the aesthetics and function of an idea to a client. The idea is then developed based on the feedback the client receives from the client. When the client is happy with the idea it is put to production where the idea becomes reality.

The product then goes through a number of tests to ensure that it functions correctly, any errors or defects are highlighted and altered and to ensure that the product is safe to be used. The product is then released on the market and bought by customers. During this time the designer will analyse how successful the product is and the overall opinion that the market has on it. This will then spark the evaluation stages where the designer will analyse the performance of the product on the market. The designer will be bombarded with feedback at this stage as the product has been available to a massive market. The designer would take in this information to alter the product before redesigning it.

The product life cycle can then be extended by introducing a sequel of the product to the market or an updated version. This is called a product extension, and it will be introduced just as the sales begin to decline to maximise profits.

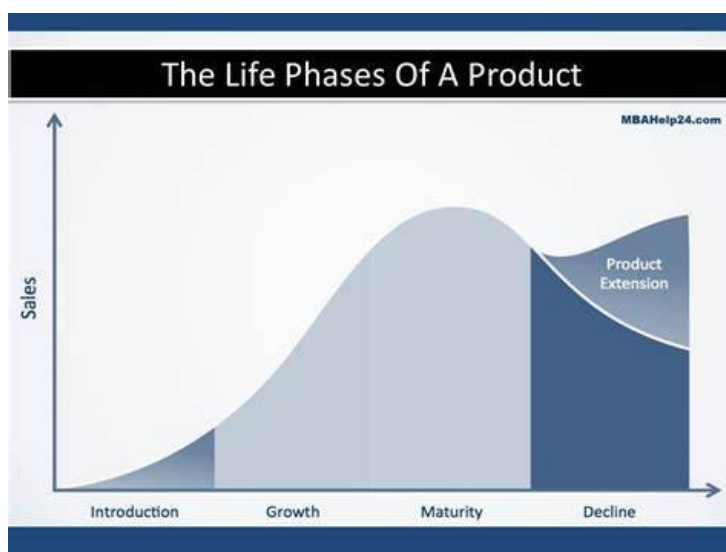


Fig 2. The Life Phases Of A Product (Kunchala, 2017)

New Design Process

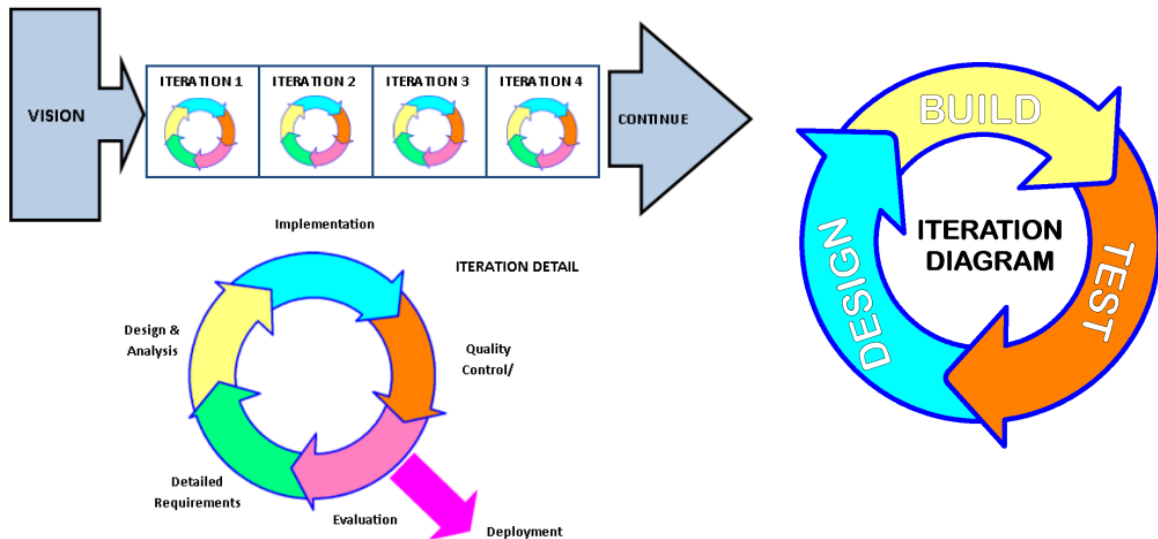


Fig 3. New Design Process (Mansel, 2017)

This is the new design process which is now part of the new curriculum for design and technology in secondary schools across Wales. This process takes a lot of inspiration from designers such as James Dyson and Dieter Rams as it follows an iterative design process. “The Design and Technology curriculum has been created with the iterative design process at its core” (Williams, 2022, p.1). An iterative design process is where a high volume of models or prototypes are made and tested before moving on. This is done to ensure that the product fits the users wants and needs and functions to a high standard.

The diagram shows that when using an iterative design process, the designer is able to step out of the loop of the process to focus about deployment and development. This allows the designer to focus on attention to detail.

This method has been adopted by many to encourage the continual testing and analysis of ideas to refine concepts and reduce flaws to ensure a successful product is created and placed on the market.

Dieter Rams and James Dyson both are well known for products that are highly functional and have little to no flaws. This is achieved through continual testing, prototyping and interaction with the target market. With the aim to produce a product that is suited to the chosen client as well as being highly functional, reliable and aesthetically pleasing.

The iterative design process has only recently become common practice and has only recently been implemented into schools. This is still not used by every designer but the modern approach is to use this technique. This has begun to be implemented into other sectors such as education. This demonstrates that this process is thought highly of and is now recognised as the ideal model to adopt.

Designers who pathed the change

It is common knowledge these days for designers that making a product easy to understand is crucial in its success in the market. Dieter Rams mentions this in his 10 principles of good design in 1980, "Good design makes a product understandable". (Lovell, 2010, p.341) This can be achieved in a numerous amount of ways such as utilizing the colour scheme to break up the product and help the user visualise the parts of the product. Keeping consistency throughout designs can also help users to understand the product without needing instructions.

Also, as I have mentioned frequently two of the main designers who influenced the change for the traditional design process to the new iterative design process is James Dyson and Dieter Rams. Due to these two designers now and in 10 year's time know that good design is refined and developed overtime. James Dysons work is a perfect example of this as he is a

designer who was one of the first to popularise the iterative design process through prototyping and testing. "I made 5,127 prototypes, I learned from each one. That's how I came up with a solution." (Dyson, 2003, p.15) Dyson would learn from his failures and use the feedback to make the next iteration better. Iterative design ensures that a design is refined and developed to its fullest. This involves a cycle of high volumes of rapid prototyping followed by rigorous testing to neutralise any errors or faults with the design as Dyson did with his 5,127 prototypes.

Along with a drive for a functioning product with careful consideration for the end user, Dyson is known to introduce innovative technological advancements. The blend between new technology and improving existing design solutions to make it easier for the client is a key part of modern design. With the ever-increasing use and demand of technology designers must consider the relationship between the technology and the user. As technology develops there will become a less of a need for humans to take the lead role in activities. This must be a consideration for designers as there must be a balance between machine lead process or a human lead process. "Someday cars will no longer need drivers. Instead, people will all be passengers, able to gossip, read, or even sleep while the car chauffeurs them to their destination." (Norman, 2007, p.47)

Inspiring the next generation

Wales is currently developing a new curriculum that aims to modern, considers all cultures and to inspire the next generation of workers. The successful futures' concept is now in its second year in schools. My case study is Morriston Comprehensive School where they have designed and trialled in year 7 and 8. "At Morriston, we aim to inspire the next generation of designers. We believe that problem solving, challenging current design solutions and developing innovative products are the focus areas for these future designers." (Williams, 2022, p.1) The design and technology department has created a range of projects that are inspired by the iterative design process. The scheme of learning encourages learners to explore ideas and learn from these experiences.

Whilst spending time in the school and interacting with project and the environment I was made aware that the iterative design process is also being use at GCSE level to develop the skillset and consideration for the user and the end outcome. The department is now creating modern and bespoke projects that learners will use but provide them with the foundations for designing products without direct guidance from the practitioner.

The projects created allow learners to develop concepts using a range of materials and equipment with a view to give them the skillset they need to advance in their journey as a designer or maker.

An example one of these projects is a table tennis paddle which is designed and made by learners in year 10. While using the old design process it was found that the outcomes would tend to be very similar and lack creativity. However, when trialling and using the new design process it was found that the outcomes designed and made by the learners became a lot more creative and unique with each design looking different to the other.

The outcomes range in shape, style and themes due to the iterative design process. This is because the process pushes creativity as it demands that the learner to create models and prototypes that look different. This ultimately allows the learner to challenge the traditional table tennis paddle and push the boundaries of creativity by experimenting through prototypes and trial and error.



Fig 4. Table tennis project (Student example, 2023)

When delivering these types of projects, the practitioner regularly reminds the learners that failure doesn't result in a low grade but the journey they have taken and how they have responded to feedback from the client or the challenges they have faced.

Creating a unique design improves engagement with the learner to the project as they are making a table tennis paddle with a design that they have created themselves. This allows for the outcome to be higher quality as learners take pride in they're work. A unique and creative design also create a sentimental attachment for the learner to the product which can further boost the quality of the outcome.

The new iterative design process also has more freedom as the learner can focus or prioritise the form of the product or the function. This can cause a range of designs as some learners

table tennis paddles may allow the function to determine the form where as other may prefer a less practical product that is aesthetically pleasing.

Building a successful future

Donaldson has created a framework that if adopted correctly by the practitioner they should begin to build resilience, independence and should consider the view points of all. My findings from my case study suggest that the tasks, activities and content of lessons must inspire and engage the learner if it fails to then outcomes will suffer as a result. If it succeeds then the outcomes will be of a much higher quality. If the learners are immersed in the projects then they are much more likely to pursue the subject as a career path which should be the aim for all practitioners.

With the continual refinement and focus to the iterative design process alongside modern and engaging projects learners will begin to spark and interest and a passion for this subject area. The projects that are set can be used by learners and they can relate to. The projects developed must allow time for development and testing alongside freedom for creativity.

To ensure young designers whether in schools or in industry will be familiar with Dieter Rams principles of design which will encourage a designer to consider all aspects of a product to ensure it is successful.

Practitioners and professionals within industry are promoting the use of Dyson and the iterative design process accompanied by Rams and his principles to inform the next generation to consider all aspects of a product including environmental factors.

In the modern day there is a duty for designers to promote and encourage the use of sustainable materials manufacturing processes and long-lasting designs. By delivering and sticking by these tested methods and approaches designers will create high performing solutions that also have a sustainability consideration. In turn with the delivery of this the younger age groups it should result in more designers in the modern day with the correct ethical considerations towards design.

Conclusion

In conclusion it is clear to see the impact that designers such as Dyson and Rams have had on the design process and how they have influenced the new design process and modern designers themselves. This also has a direct impact on how learners are inspired by and follow to work of these practitioners and designers. Learners follow the process pathed by Dyson and Rams to consider the client and detail through prototyping and carrying out rigorous testing.

It is also clear to see why the design process has changed in the new curriculum across Wales to create more creativity and engagement for learners. “Young people’s experience at school should have stimulated their imaginations in ways that engender excitement, are personally fulfilling and foster creative thinking.” (Donaldson, 2015, p.30). Schools across Wales have adopted the iterative design process to spark this creative thinking.

Based on the way that learners are being educated today it is without doubt it say that designers in the next 10 years and further will use the iterative design process. However, it is unclear how much control humans will have over the process as technology is rapidly

advancing. It goes without saying that over recent years millions of jobs around the world have become obsolete due to this advancement in technology.

Overall, I believe that design will stick to its roots and stay a process that is controlled by humans that will use an iterative design process. I also believe that technology should be used as a tool for designers for accuracy and to refine ideas at higher speeds.

Bibliography

Donald A. Norman (October 30, 2007) *The design of future things*, United States Of America: Illinois

Donaldson, Graham CB (February 10, 2015) *Successful Futures Independent Review of Curriculum and Assessment Arrangements in Wales*, United Kingdom: Wales

James, Dyson (April 17, 2003) *Against The Odds an autobiography*, United Kingdom: London

Sophie, Lovell (January 1, 2010) *Dieter Rams: as little design as possible*, United Kingdom: London

Student example (December 5, 2023) Table tennis project (photograph)

Mansel, Davies WJEC (November 9, 2017) Design and Technology: Product Design (Photograph) Available at [Resource WJEC Educational Resources Website](#)

Nathan, Willams Head of technology at Morriston Comprehensive School (September 2, 2021) *Scheme of learning*, Wales: Swansea

Opus, W. (July 23, 2016) Design Process Diagram (Photograph) Available at [5 Must See Infographics for Design Learners | OnlineDesignTeacher](#)

Kunchala Rao K S. (June 5, 2017) The Life Phases Of A Product (Photograph) Available at [Product Life Cycle Extension Strategies \(thetimesbusiness.com\)](http://thetimesbusiness.com)