# Topic area 2 – Learning from Existing Products and Practice

# Exploring the work of past and present professionals

# Introduction

## Overview

Delivery guides are designed to represent a body of knowledge about teaching a particular topic and contain:

* Curriculum Content: A clear outline of the content covered by the delivery guide;
* Thinking Conceptually: Expert guidance on the key concepts involved, common difficulties students may have, approaches to teaching that can help students understand these concepts and how this topic links conceptually to other areas of the subject;
* Thinking Contextually: A range of suggested teaching activities using a variety of themes so that different activities can be selected which best suit particular classes, learning styles or teaching approaches.

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# Curriculum Content

## Overview

*EXAM CONTENT*
2.1 What are the opportunities and constraints that influence design and making requirements?

Exploration and critique of existing designs, systems and products to identify features and methods, considerations should include:

1. the work of past and present professionals and companies in the area of Design and Technology

*NEA CONTENT*

1. Investigate and analyse the wider work of professionals and companies in order to stimulate their own design thinking

# Thinking Conceptually

## Overview

### General approaches:

### Remember we are trying to have a focus on 21st century design here. Earlier designer movements should only really be considered for their influences.

Where it is possible for the design process to be influenced by the work of previous designers and design movements, this is an excellent opportunity for historical case studies to be examined in order to shape the development of a future solution. Design movements will have identifying criteria which will give a direction of travel to a learner looking to imitate such a stage in history, for example Bauhaus produced very specific palettes for colour schemes and the subsequent form of the solution.

The influence of these movements can form the basis for understanding the timeline of design, and what characteristics were desired, but the technical knowledge about material exploration and processes should also play equal if not more prominent relevance. For example deconstructivism gives way to certain types of design solutions which often function in a modular way, but the range of new materials and processes which are applied to such solutions would complement the understanding of this movement, as to inform later technical specification writing. In this way, students should not be influenced heavily by the aesthetic factors of a design movement, but by the all of the factors which influenced the design movement.

Similarly, the design movement in all but the present case has been and gone, and as such would only be reference able for case studies of design success, or where innovative approaches led to unique solutions, and the approaches can be copied (rather than the styling of the outcomes) to generate new design ideas. The market for retro designs that echo the past is very small and should not be considered the focus of a design approach. Attempts to identify future design movements based on the trends in society and consumerism is a much stronger approach for students to iterate and innovate.

In researching professionals and companies, it is important to recognise their status in society. For example there may well be scope to explore the work of current graduating students from a specific design course in the UK or abroad, to understanding what the “latest” market interpretations looks like in product form. However there is also the opportunity to consider products that have made it to market via a large and high profile leading design company or manufacturer. Both ends of the design spectrum will provide insight which can be analysed, and with respect paid to who is being analysed, different interpretations can be derived and used to develop the technical specification. I.e. products already successfully in the market are a strong case for successful design, whilst designs at a conceptual stage by graduating students are very much at the forefront of design teaching, and achieve market success. It is important that students can identify these factors when researching and being influenced by the work of others.

Guidance on these considerations, rather than example case studies, would support a broad and diverse approach to choosing who to research and with what justification.

### Common misconceptions or difficulties learners may have:

The study of design movements should not provide the design criteria for new solutions if the context, user and stakeholder, or the developed design brief do not request it. Design movements have often been studied to create a criteria by which designs can be commercially styled. This is called commercial design, and as such is a low level skill whereby students imitate a style by selecting the same colours and shapes used in a past movement, and apply it without function to a new product. If the solution being designed is to meet broader requirements, the technical specification will include parameters for measurable outcomes, such as use of anthropometric data, number of parts when disassembling, and other such considerations. A design movement studied will simply offer a styling approach, for which there is a specific interpretation to be successful, and the option to iterate away from this style would not be viable.

### Conceptual links to other areas of the specification – useful ways to approach this topic to set learners up for topics later in the course:

The ability to analyse and research past and present designers and design movements is an important skill because of its ability to imitate other similar analysis activities such including product disassembly. The analytical framework that is used and learnt here will provide some students with the chance to apply it to future activity. Because the task is designed to stimulate design thinking, the summative information that the research produces can be viewed alongside other research outcomes, and will formulate a technical list of requirements for design.

# Thinking Contextually

## Overview

To develop an awareness of the timeline of design and how it has evolved through different design movements to the modern day, a useful starting point is to present students with a Design Era timeline graphic, commencing with the Arts and Crafts Movement of 1850-1915, and finishing with the Deconstructivism of 1988 to the present. Using a graphic to convey this information, supported by iconic pieces of design, students will be able to appreciate the dramatic changes in styling that have taken place. The design movements, supported with short explanations of each as text or information cards, will be a sufficient starter for a lesson in which pupils subsequently engage with current trends, professionals and companies.

The purpose of studying past and present design work is to create comprehensive collations of information that can be used to influence design iterations and throughout the design process. For this to happen, learners will need to be privy to decision making associated with the development of design solutions. Useful books on the topic include those titled ‘[Design Secrets](https://www.amazon.co.uk/Design-Secrets-Products-Real-Life-Uncovered/dp/1564964760)’ or ‘[Innovative Design Practice](https://www.amazon.co.uk/Innovative-Product-Design-Practice-Carl-ebook/dp/B00B29V9RQ)’, where the reader is welcome to learn about case studies of common and sometime famous design solutions, and the designers and manufacturers decision making during the iteration and development stages of the project. Books of this kind provide the opportunity to learn about design solutions, and the chance to lift case studies from these and use them in the classroom. Often these books provide insights about inspiration, supported by working sketches and drawings, CAD images, storyboards and photographic evidence of the iterations in models and solutions behind a product which made it to market.

A likely lesson approach to exploring and identifying opportunities is to use the internet to conduct searches for current design trends. Websites such as [Core77](http://www.core77.com/) provide a blog of regular market trend updates such as exhibitions and trade events where the styles of the next 12 months are presented, or where modern and leading design work from all fields of study are blogged about to inform a broad audience. The website also provided access to [Coroflot](http://www.coroflot.com/), a portfolio platform for past and present graduates of design courses across the globe. Students will be able to search by field of interest, key word, location in the world or simply browse popular portfolios to see and be inspired by the design work of others. Often portfolios will be rich in information including presentation boards where projects are compressed into single images for display at a degree show.

An alternative approach to learning about design trends is to look at the less mainstream route of crowdfunding websites, where designers small and large can pitch conceptual project ideas, developing and cutting-edge design solutions, with some projects providing regular design project updates to show how the project idea is changing and evolving. The iteration process is often conveyed in highly technical ways where the project is a technical solution, for example for a drone or 3D printer, and the barriers and challenges can range from component design to differences in culture between customer countries and manufacturing countries. Crowd funding websites also provide the scope to identify projects and trends which are popular, as projects can be filtered by “funded” and “not funded”, identifying if and when the crowdfunding community has endorsed and put backing behind new project ideas.

Case studies are published more often by major design companies looking to share design experience, including video sharing platforms where design journeys are presented as a series of short videos. University courses are known to offer insight into the design approaches applied by students at undergraduate level through prospectus and online webpages about the courses they offer. A fantastic showcase of graduate work includes ‘The New Designers Exhibition’ annually at the end of June/start of July in London. Students lucky enough to attend such an event could similarly discuss projects with students, and use these leading design education graduates as a source of inspiration for their next project.

Similarly, if local design agencies, companies and firms are able to provide access via a visit or through a visiting speaker to the school, the opportunity to be inspired and research design within regions is also viable as an approach for finding influences worthy of using to fuel the next design stage.

Where learners have the opportunity to review and then critique the work of other designers, they will again need to apply the techniques used for analysing existing solutions. This will include identifying materials, components and processes, using the supporting tools developed by the teacher for conducting this task. Where information allows, students should aim to identify areas of concern such as usability, impact on society and the environment, and see these and further factors as areas to stimulate design thinking.

Once learners have found suitable information to work with, they should collate their findings into technical summaries of the research they have conducted, and aim to justify their early ideas of opportunities and constraints by the words and actions of these inspiring professionals and companies.

## Prototyping to final product

These videos follow the journey of a design company from concept to final product. The example is a solar charging unit for a mobile phone.

The videos give a detailed insight into the stages of the design process. Each video provides insight into the important decision making, iterations and changes that took place, take students through the complex task of bringing a product to a final commercial point. The lessons for this would be based around students identifying decisions and their justifications for each decision.

### Resources

[Botzen design video](https://www.youtube.com/watch?v=_WHxoGJVciE)

## Crowd Fund study

Learners use the search engine to look through successfully funded and unfunded projects relating to the context of their choice. They can reflect on ideas, record ideas that failed to make it to market, and try to identify trends in successful project themes.

### Resources

[kickstarter.com](https://www.kickstarter.com/)

## Design heroes

Learners select from a range of Design heroes an individual to study. Their task is to create a social media style page tracking their design life successes to date.

Learners might, for example, choose (from a teacher chosen list) Yves Behar, and create a “Facebook” style page of the design successes of this modern leading designer. Under each image (of their design ideas), they are tasked with creating a short caption that outlines the design success and features of their designs.

## Learning from iteration

Learners are tasked with identifying a case study of iteration that they can study. The teacher may wish to provide this to the learners initially or allow for open research on the internet.

### Resources

Learner Resource 2 (Available on Teach Cambridge)

Please note – web links are correct at date of publication but other websites may change over time. If you have any problems with a link you may want to navigate to that organisation’s website for a direct search.



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