Session 4 Notes

Objectives	To gain feedback on students' solutions so that iteration can take place.
Overview	The video outlines the testing phase of the design thinking process. This will involve students constructing meaningful questions to gain feedback on their solutions. They will evaluate the feedback in order to iterate their solutions. The video should be paused at 2.57 for this work to take place. The next phase requires students to create a storyboard to show and understand the journey of their target market using their solution. The Reflection Journal can be completed at the end of the lesson or set as homework.
Resources	The video guides the structure of the session. The teacher can alter the pace according to the needs of their students and the time available. Video lesson Question design worksheet Feedback capture grid worksheet Storyboard worksheet The Reflection Journal can be completed at the end of the session or set as an extension or homework. The Optional questions for discussion and/or refection in this document can be set as prompts for this reflective task. The Creativity Playbook can be used to provide starter or extension activities.

Skills focus	- Analytical thinking - Active learning - Critical thinking - Communication - Collaboration - Prototyping - Creativity - Ideation - Reasoning - Problem-solving
Duration	60 minutes (minimum)
Suitability	- Students aged 12-14 (Key Stage 3) - Citizenship lessons - Broad General Education (Scotland) - A Problem-Solving/Thinking Skills co-curricular club - Personal, Social, Health and Economic (PSHE) education thinking skills unit.
Key terminology used in the video.	*Data* - facts or information, especially when examined and used to find out things or to make decisions. *Feedback* – advice, criticism or information about how good or useful something or somebody's work is. *Target market* – a particular group of consumers at which a product or service is aimed. *Iterate*– to say or do again or again and again.

	Prototype – a first full-scale and usually functional form of a new type or design of a construction. The first design of something from which other forms are copied or developed.
Optional questions for discussion and/or reflection.	Iteration based on feedback is essential for products and services to meet the needs of the end user. Students can be encouraged to consider the limitations of customer feedback. This could include identifying what customers don't want, rather than what they do want and the notion that the most vocal customers are disproportionately represented. How can organisations ensure that they hear all voices from their target market including marginalised groups? They can also consider the value of customer feedback in that it can help organisations make better data-informed decisions, create innovations and foster loyalty as the act of asking for feedback suggests an interest in the views of others and a willingness to listen. This shows a desire to be empathetic. Why is it important and valuable for us to 'walk a mile in another's shoes'? What are the traits of an empathetic person? Not everyone experiences empathy in every situation. Some people may be more naturally empathetic in general, but people also tend to feel more empathetic towards some people and less so towards others. Why do you think this might be the case? (This could be based on people's assumptions and perceptions of others and their past experiences and expectations of others. There are barriers to empathy that some people can experience based on *cognitive biases* (a systematic error in thinking that occurs when people are processing and interpreting information in the world around them and affects the decisions and judgments that they make), *dehumanisation* (when we consider that other people we believe are fundamentally different to us don't feel or behave in the same way as us) and *victim blaming* (some people believe that other people get what they deserve and deserve blame for their misfortunes).

Extension

Students could be encouraged to consider examples of products that they are aware of or perhaps own that have been through multiple iterations. Examples could be the Apple iPhone, the size and names of chocolate bars (eg: Snickers, previously named Marathon), pushchairs and prams, clothes irons, etc. This [website](#) offers some interesting ideas as does this [website](#). Students could be asked why they believe these iterations have taken place. Possible answers could include technological advancements, changes in lifestyle, changes in expectations, change in user or target market, safety requirements, consumer demand, keeping up with competitors in the market, customer feedback etc. They may also think about products and businesses that failed to innovate and the consequences of this. Examples could include Blockbuster and Kodak.

Transcript of Video Session 4

Now you need to test your solution. You need to define goals for this phase of the process by considering:

1.   What you want to learn

2.   What you want to test

3.   With whom you want to conduct the test and where.

You could carry out the test using online tools. This would help to capture the data efficiently and would widen your reach. Consider using Microsoft forms to collect feedback as this makes giving feedback a straightforward experience for the testers. You may come up with alternative or additional ways to collate feedback from your target market that involves in-person discussions. or interviews.

Think carefully about the questions that you are going to ask so that you can gain the most valuable feedback on your solution to help you iterate or improve the solution. Take a look at the question starters shown here to help you get started with this construction.

How to construct effective questions

A good question....

- Is open-ended.

- Is thought-provoking & intellectually engaging, often sparking discussion & debate.

- Calls for higher-order thinking, such as analysis, inference, evaluation, prediction. It cannot be effectively answered by recall alone.

- Raises additional questions & sparks further inquiry.

- Requires support and justification, not just an answer.

- Recurs over time; that is, the question can & should be revisited again & again.

Good question starters:

- Why....?

- How would it be different if....?

- What are the reasons....?

- Suppose that....?

- What if....?

- What if we knew....?

- What is the purpose of....?

- What would change if....?

- Had.....would.....have occurred?

- How influential was.......in......?

- What if we knew....?

Testing the solution

Note the questions that you will ask your target audience in order to gain feedback. Remember to consider what you want to learn, what you want to test, with whom you want to conduct the test and where

1.	2.
3.	4.
5.	

Using this feedback, you should draw conclusions from the findings. You could use a Feedback Capture Grid to help you with this process.

The next phase involves you looking at your original design and using the feedback to refine it. This process is called iteration. It just means that you are going to make adjustments to the prototype so that it can better meets the needs of your target market.

The iteration of designs is incredibly important because it shows that designers are listening to their target market rather than making assumptions that their design is perfect.

Only by taking your design solution to the people likely to use it are you going to understand if the design meets their needs and expectations.

Thinking about products that have gone through multiple iterations over years you will help you to see iteration in action. Consider the vacuum cleaner.

The first vacuum cleaners were created in the United States in the 19th century and were hand powered. The next iteration of this product was a motorised version. This was powered by petrol and so large that it required a horse drawn wagon to move it. In the early 20th century, the vacuum cleaner because much more portable to meet the needs of the target market. Cylinder bags were added to the new upright design and these bags later had disposable filters. In the 1980s, the vacuum cleaner design developed again with the introduction of bagless technology. The latest iteration in the vacuum cleaner is the robotic floor cleaner that cleans at set times and over pre-programmed areas. The only human interaction required is to empty the dirt from the product. So you can see that human involvement has reduced over time to meet the needs of the user who wants to spend less time on household chores. This reflects the changing roles and working patterns of people over time. And designers have only understood these changing needs and expectations by finding out about the lives of their target market and not assuming that they knew what their customers wanted.

Take some time now to construct your questions, gain feedback, reflect on the feedback and iterate your prototype or initial design.

Now we at the stage where you should consider the journey of your target market when using your solution or design. A good way to map out this journey is using a storyboard. In this storyboard you can show how your product solves the issue that elderly people face when walking their dogs. This is where you show your solution in action.

THE USER EXPERIENCE

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