DESIGN THINKING incorporates REFLECTIVE THINKING which requires a metacognitive, mindful approach, seeking and considering feedback, reflecting on progress and processes, making links and connections with broader issues and the work of others.

Just because you have an experience doesn’t mean you have learned anything.

Reflective thinking turns experience into insight.

Reflective thinking focuses on the process of making judgements about what has happened. However, reflective thinking is most important during problem-solving situations because it provides you with an opportunity to step back and think about how you are actually solving problems, and whether a particular set of problem-solving strategies you are using is appropriated for achieving their goal.

THREE MODES OF REFLECTIVE THINKING

Wide Angle: When you reflect in the wide-angle mode, think about the big picture of your experience.

Microscope: When you reflect in the microscope mode, think about the details of your experience.

Mirror: When you reflect in the mirror mode, think about your own actions and beliefs.

There are various models of reflection. The Gibbs’ reflective cycle, below, encourages you to think systematically about the phases of an experience or activity.
REFLECTIVE THINKING AND THE DESIGN PROCESS

Learning how to design is a complex process: designing is an activity that requires a multitude of skills, techniques and methods and uses various disciplines. Learning how to design implies mastering the skills, techniques and methods, and learning about the various disciplines involved in designing. You master the skills, techniques and methods by applying them in design projects. Through reflection on your project and learning process, you are able to design more efficiently and improve your skills in each consecutive design activity.

It is important to reflect in time (just after the subject you want to reflect on) in order to remember the important aspects. You can use the reflection method just after completing a specific activity. This activity can be an applied design method (for instance a brainstorm session) but also a range of activities, for instance one completed in a specific design phase. Reflection on a regular basis, for instance every last day of the week, can also be very useful.

Thinking takes place so fast that we have no direct access or introspection of the details, what you can grasp is then output in terms of speaking aloud, making decisions or anything tangible in your behaviour. By recording it and analysing the consequences you can see clearly how you have come to a conclusion and judge it that path taken is justified.

In the Revised VCE Study Design, starting in 2013, students are expected to use reflection throughout Units 1-4. In fact, ‘reflection’ is formalised in Unit 4 -

Students refine and present two visual communications within the parameters of the brief. They reflect on the design process and the design decisions they took in the realisation of their ideas. They evaluate their visual communications and devise a pitch to communicate their design thinking and decision making to the client.

AREA OF STUDY 3
Evaluation and explanation
In this area of study students devise a pitch to present and explain their visual communications. Their pitch is informed by an evaluation of the ways that the final visual communications meet the requirements of the brief and the design decisions made throughout the design process. Students explain their thinking behind each visual communication and the reasons for their selection and use of particular materials, media and methods, design elements, design principles, and presentation formats. They draw on their annotations and reflections assembled during the design process to evaluate the effectiveness of their design solutions in relation to the requirements of the brief. Students consider client responses to their pitch. They may respond to questions and offer further clarification of their visual communication.

Outcome 3
On completion of this unit the student should be able to devise a pitch to present and explain their visual communications to an audience and evaluate the visual communications against the brief.

Do not miss the opportunity to learn from your experience. When your activity is complete, it is too often the case that you immediately move on to the next. Take some time to review, reflect and record your learning. At the very least, for each activity, record the following information:

- what you did
- why you did it
- what you learned - how you would do things next time for next time
- how you will use it
- what further action or development you will undertake as a result

Reflection, or self-evaluation, leads you to really learn what your strengths and weaknesses are. This means you will be able to see what points you have that you can further cultivate and grow, and which points within you need further attention. Being able to self evaluate will also help you in future, as most organisations now use processes of self evaluation. This means that being able to recognise the importance of self-evaluation and being able to implement these steps is a very marketable skill that you can use to sell yourself to an organisation once you start your career.
WHAT QUESTIONS DO YOU ASK YOURSELF?

Here are some questions you may use in a number of different situations

1. What happened that most surprised you?
2. What patterns can you recognise in your experience?
3. What was the most fulfilling part of it? And the least fulfilling part of it? What does that suggest to you about your values?
4. What happened that contradicted your prior beliefs? What happened that confirmed your prior beliefs?
5. How do you feel about that experience now compared with how you felt about it at the time?
6. What does the experience suggest to you about your strengths?
7. What does the experience suggest to you about your weaknesses and opportunities for development?
8. How else could you view that experience?
9. What did you learn from that experience about how you react?
10. What other options did you have at the time?
11. Is there anything about the experience that was familiar to you?
12. What might you do differently as a result of that experience and your reflections on it? What actions do your reflections lead you to?

Here are some questions you may use specifically in a DESIGN PROCESS situation - about the finished design (some questions apply more to Product Design)

1. What do you think of the overall design? What changes would you make?
2. Are you happy with the materials you chose? Would you make adjustments next time?
3. Is the colour scheme exactly what you expected? What alterations would you make?
4. Did the project take too long to complete? Why?
5. Would it be easy to set up a production line for the manufacture of your solution?
6. Is your solution safe? Could it be made safer?
7. Are the techniques you used to make your solution adequate or would you use different techniques?
8. Is the solution the right size/shape?
9. What are the views of other people regarding your design?
10. Does it work? What changes are required?