2 Learning Processes and Preferences

OBJECTIVES

What this chapter will give you:

- Exercises to identify weaknesses in approaches to learning
- Challenges to change worn-out methods that yield poor returns
- Illustrations to make learning clear and memorable
- Checklists to provide overviews of learning features
- Thinking and learning styles for personal development and achievement

2.1 Adapt a positive exam perception

It is quite possible to underachieve at university and to remain in a static state of mediocrity in terms of your performance. Exams play an important role in your overall achievement, so how you think in relation to them, and to the learning process associated with them, is important. The aim of this chapter is to challenge your mindset about exams (if needed), and to guide you towards effective adjustment.

Exercise – Troubleshooting on exam problems

First, read over the following list and circle a number from 1 to 5 as appropriate, according to the code that follows (avoid 3 unless you have to use it):

1 = Strongly agree. 2 = Agree. 3 = In between. 4 = Disagree. 5 = Strongly disagree.

(Continued)

(Continued)

1.	I generally underachieve in my exams	1	2	3	4	5
2.	I have a good exam revision strategy	1	2	3	4	5
3.	Exams are not my strong point	1	2	3	4	5
4.	My time management in exams is very good	1	2	3	4	5
5.	I take too long choosing exam questions	1	2	3	4	5
6.	I feel very confident when I approach exams	1	2	3	4	5
7.	I rely chiefly on my course work to boost my grades	1	2	3	4	5
8.	I cope very well with exam stress	1	2	3	4	5
9.	My memory techniques are inadequate	1	2	3	4	5
10.	My technique for exam rough work is efficient	1	2	3	4	5
11.	I stick to my exam methods although I know they can be improved	1	2	3	4	5
12.	I use a good structure for my exam essays	1	2	3	4	5
13.	My exam grades are a poor reflection of the effort I invest	1	2	3	4	5
14.	My writing style is clear and easy to follow	1	2	3	4	5

You have a positive perception of your exam ability if you tended to answer towards 'agree' to the statements with even numbers (2, 4, 6, 8, 10, 12 and 14), and towards 'disagree' to the statements with odd numbers (1, 3, 5, 7, 9, 11 and 13). Don't worry if you think your score is disappointing – treat this information as useful knowledge that will help you get more out of the book. The issues will be worked out in more detail in this and subsequent chapters.

2.2 Making imaginative use of resources

Illustration – Style or fashion?

Fashion in dress is chosen and directed by the gurus in the fashion world and is then marketed in trendy magazines, by celebrities and through shows on the catwalk. It is then distributed by retail fashion outlets. The momentum is kept going by 'dedicated followers of fashion' who read the magazines, which are like a bible to the faithful. In order to conform to the changing trends in fashion, individuals do not have to be creative or original. Rather, all they have to do is keep up with the moving trends and ensure that they have a healthy bank balance! On the other hand, a stylish person may not follow every fashion that emerges on the High Street, but can still dress in a fresh, imaginative and appealing manner. Indeed, they may blend colours and styles in a way that complements and enhances their own physical features (contours, complexion, hair, eye colour, physique, etc.).

It may surprise some students to know that fashions and trends are also characteristic of the academic world. Government policies sometimes change the educational agenda and quality control bodies ensure that these are implemented. This does not mean that all the changes that come are a bad thing, but sometimes we end up going back to where we started before the experiment! At present, exams represent one of the issues in the melting pot, but many are arguing for their retention (alongside other methods of assessment).

One of the aims of this book is to help you with the learning and thinking styles that will serve you well irrespective of the changing vogues in assessment trends.

The following is a checklist of qualities that should be useful across a range of assessment methods.

Checklist – Timeless principles for learning and assessment

- ✓ Present a range of issues in a balanced format
- ✓ Include a critical approach to the treatment of a subject

- ✓ Show that arguments are underpinned by evidence
- ✓ Make good use of headings and subheadings (even as rough work)
- ✓ Do not pad out arguments with non-essential extras
- ✓ Keep a good clear structure and maintain a good flow of argument
- ✓ A problem-solving approach is a good strategy for argument
- ✓ Demonstrate both memory work and understanding
- ✓ Produce evidence that you have learned independently
- ✓ Integrate material from a range of sources and be up to date

Once you have identified the issues that will be beneficial to learning and assessment, you should also consider the issues that will detract from the quality of your learning, and these are highlighted below.

2.3 Never flog a dead horse

Most of us probably believe that, 'if it ain't broke, don't fix it!' On the other hand, it is foolish to persist stubbornly with a method that is clearly not working. In the words of a common adage, it is foolish to 'flog a dead horse'.

The lesson is to assess what will work and what will not, and to drop what will not work.

However, sometimes habits are so firmly entrenched that they are difficult to let go. Nevertheless, changes can be very liberating and can empower you with newfound confidence. It is important to give yourself some practice at different approaches to exams before attempting something novel in an exam situation. This is a more cautious approach in changing your exam strategies.

PRINCIPLES FOR CHANGING EXAM STRATEGY

- **Recognise the futility of methods that limit you**
- **Identify problem areas and earmark them for change**
- **Replace tired old ways with fresh new approaches**
- **Practise the changes in mock, self-chosen tests**

- **Implement changes in a manageable manner**
- **Continue to monitor the need for change**

EXAMPLES OF ISSUES THAT MAY NEED CHANGED

- **Revision reading that is not focused and relevant**
- **Possessing too much loose material that is not organised**
- **Not reading exam questions carefully enough**
- **Leaving division of time and labour in exams to instinct rather than planning**
- **Too much monotony in learning activities**
- **Failure to 'export' and 'import' material across topics and subjects**
- **Heavy reliance on memory work alone**
- **Gambling on the 'right' questions coming up in an exam**
- **Tendency to present a lengthy descriptive introduction**
- **Complex and elaborate rough work that takes up too much time**
- **Resolution to return every detail presented in a lecture**
- **Determination to 'bend' the question into what was hoped for**

Illustration – Two aspects of a recipe

Every individual has his or her own strengths and you should ensure that you capitalise on yours (although not at the expense of other aspects of your performance). For example, some individuals have an extraordinary memory but the danger is that they present their responses in a form that reads like a telephone directory! Take the example of a recipe. It is not sufficient to provide

(Continued)

(Continued)

a list of ingredients with all the exact measures needed. You must also present the method in which they are to be mixed in terms of order and strategy. Thus, if your strength is in understanding how the ingredients are mixed, it is also essential to remember to include the quantities for each substance. Applying this theory to exam techniques, the first step is to list the important names and facts (the ingredients) that have to be remembered. You can list these initially as part of your rough work. The second step is to relate 'the ingredients' to the question in the order and mix that is most suitable in addressing the issues raised in the question. So think of both ingredients and method as you approach your exams.

2.4 Thinking in style

According to Sternberg (1997), individuals are likely to differ in their preferred thinking styles and he identifies three major approaches. The first is the Executive style and this pinpoints the people who love to be creative. These are the people who enjoy the freedom of creating their own ideas and designing their own projects. The second is the Legislative style and this refers to the people who enjoy carrying out the plans and projects that others have designed. They have no desire to be original, and they enjoy making the plans of others work. The third category is the Judicial style and this describes the people who like to assess and to come up with constructive suggestions for improvement. At university, it would be an advantage to develop all three approaches, even if you feel you are strongest at one in particular. Some examples of how you might apply the three styles to learning activities or assessment tasks are presented below. (Codes: Executive = E, Legislative = L, Judicial = J).

- **Doing a multiple-choice exam (L)**
- **Reading over set material for revision (L)**
- **Planning out division of time and labour in an exam (E)**
- **Using efficient ways to remember material in mnemonics (E & L)**

- **Writing a critical evaluation of evidence (J)**

- **Flexible ways to adapt what you have learned to the slant in a question (E)**

Many of your academic tasks will require an integration of all styles although some tasks will be more oriented towards one.

2.5 Thinking in structure

It is claimed that we cannot cope with the bombardment of information that enters our minds on a daily basis unless we already have some established mental structures into which to fit the onslaught (Aronson et al., 1994). These are sometimes referred to as cognitive templates and their purpose is to help us make sense of the world and to prevent our minds from becoming chaotic. As you will later see, it will help your memory recall if you can learn your material in an organised manner. There is a range of useful memory techniques that you can profitably employ and some of these will involve a structured approach to learning. Think of how chaotic a public library would be if the books were not clustered under topics and arranged alphabetically by authors' names. Library staff cannot perform a good public service unless they ensure that their books are arranged carefully in order. In the same way you will profit from your learning if you pursue it in an organised way and you have an organised system for memory, note-taking, outlines, etc.

2.6 Thinking in substance

You cannot think adequately if you do not have the raw materials (i.e. basic information) to think with. As noted above, the method for the recipe is not enough without the list and quantities of the ingredients. If you write a critique in it response to an exam, the quality of your work will be limited if you omit important aspects of the topic. You may not, for instance, know the most recent developments in research, and this may mean that your conclusions are out of date.

Illustration – Discovery of a new drug treatment

A student might cite that the cure for a certain disease had been found and that it was totally successful. He or she might be able to name the drug that has been used as the method of treatment and the researchers who had made the discovery and pioneered the tests. However, if there had been a number of recent reports concerning bad side-effects from the drug, and the student failed to mention these, then important information is missing. The result is an incomplete and inaccurate reflection of the effects of the drug. Therefore, in spite of the fact that the student may have been a critical thinker, the overall conclusion is somewhat inadequate.

In sum, you must ensure that you possess the range of relevant information to present an adequate critique.

TYPICAL COMMENTS MADE BY EXAMINERS ON EXAM SCRIPTS

Although the following comments are fictitious, they are not untypical of what examiners look for. They may give you some further insight into how you can continue to improve your exam strategy.

Deficient	Commendable
Lengthy introduction	Clearly and concisely written
Poor structure	Clearly structured presentation
Lacks evidence	Good use of evidence
Overly descriptive	Good quality critique
Loses focus	Maintains focus throughout

Lopsided arguments	Well balanced arguments
Limited content range	Wide content range
Weak in cited sources	Rich in cited sources
Question not directly addressed	Question adequately addressed

2.7 Thinking in sets

In 1942, A.S. Luchins carried out a series of experiments in which children had to solve a problem by pouring water into jugs of various shapes and sizes (Luchins, 1942, also cited in Hayes & Orrell, 1994). The children learned to work out the solution by following a set sequence of actions. Once a 'learning set' had been established, Luchins introduced another problem that could be solved by a more simple and direct route. However, because the learning set had become entrenched, the children followed their usual routine and were 'blinded' to the more direct solution.

> *The lesson to be learned is that you should not automatically adopt a fixed approach to problems without first thinking if there is a better way to accomplish the task.*

Sometimes we persist with methods even when we know that they could be much improved. Consider the following two lists. One refers to a set approach to exams and the other to a flexible approach. These are not either/or approaches – they illustrate when a set approach is best (first list) and when a flexible approach is best (second list).

Where a 'closed' or 'set' approach to exams might be best:

- **Early identification of questions to be targeted**
- **Distribution of tasks by division of time**
- **Reproduction of brief, memorised structures as rough work**
- **Preferred topic areas to tackle**
- **Back-up plan if preferred topics to do come up**

Where an 'open' or 'flexible' approach is more likely to be fruitful:

- **Exclude prepared material that is not relevant**
- **Re-arrange memorised outlines around the slant in the question**
- **Change the order of prepared points and omit irrelevant points**
- **Change the emphasis of prepared points (e.g. subheadings to main headings)**
- **'Import' material from other topics (if it blends in smoothly)**

2.8 Thinking in systems: to converge or diverge?

Illustration – A Greek philosopher and a bucket of water

A man threw a bucket of water over the philosopher Archelaus as an insult. When Archelaus failed to react, he was asked how he managed to remain calm in the face of provocation. His answer was that the person had not thrown the water over the true Archelaus, but over the man the attacker thought Archelaus was! Archelaus was able to look at the problem in a different way and see his attacker in a different light. He was convinced that the man would not have thrown the water if he had known the true nature of Archelaus. Perhaps if the philosopher had reacted angrily and retaliated he would have confirmed the attacker's negative perceptions. In short, Archelaus could see much more clearly than his attacker and was, by his calmness, in effect helping the aggressive person with his blindness.

The application of this story to an exam situation is don't just rush in with the first idea that pops into your head. Hold off for a moment or two while you jot down

various possibilities. It may well be that a richer interpretation of the question will emerge as you engage your mind with various possibilities. This is further reinforced in the example of children's learning and development.

The Swiss psychologist Piagat identified stages of learning that children are likely to pass through in their cognitive development. He suggested that children go through a phase in which they are 'ego-centric', i.e. they see objects only from their own standpoint. One of Piaget's typical experiments was designed to demonstrate children's need to emerge from this limited stage of development. He would place a model mountain in the centre of a table with the child observing an object, such as a doll, at the side of the mountain visible to them. At the other side of the model mountain would be another object that the child could not see but that was visible to the experimenter at the other end of the table. When the child was asked what they saw, they were usually able to describe the object in front of them quite clearly. However, the crucial test was when they were asked to describe what the experimenter saw at the other side.

His experiments demonstrated that children were not always able to realise that what a person saw who was at the opposite end of a table to them was different from what they saw at their end of the table. At some stage in the children's development they learn, according to Piaget, to 'de-centre' and identify correctly the object that the person opposite sees rather than the object that they see. It can further be argued that same principle also operates in the social world. Social development and maturity come when we can project ourselves into other people's position and see things from their standpoint. An old proverb advises that we should never criticise another person until we have walked a mile or two in their shoes.

The principle can finally be extended to thinking and learning (and therefore to your approach to your assessments and exams). Instead of going into 'automatic pilot' about set ways to learn and approach assessment tasks, you might consider employing some of the following techniques (these points are illustrated with examples throughout the book).

STRATEGIES FOR EFFECTIVE APPROACHES TO THINKING AND LEARNING

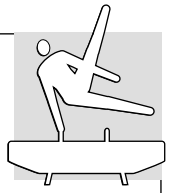
- **Make connections between various aspects of your topic**
- **Fit each unit of learning into the overall context of your study programme**

- **Share resources mutually with others**
- **Set tasks and goals for each other and check that they are accomplished**
- **Set questions for each other and meet with prepared answers**
- **Meet together as a group and design the structure and sequence of a subject and how you would assess it**
- **Set problems for yourselves and structure the course material around the solutions**
- **Think of illustrations and applications that will make the material live**

2.9 Thinking the unthinkable!

In addition to thinking styles, educationalists have also suggested learning styles. Examples of these are the activist style, the reflective style, the theorist style and the pragmatic style. You can try out the following measure (adapted and modified from an existing measure) in order to identify your preferred learning style(s).

Exercise – Tick whether you agree or disagree with each of the following statements.



Statement	Agree	Disagree
1. I usually interpret problems as opportunities		
2. My preference for learning is for practical situations		
3. Problems present me with a challenge I enjoy solving		
4. I prefer to have time to ponder over what I have learned		

(Continued)

5. I am not content until I have heard all aspects of arguments
6. I like to learn by observing others
7. I do not like to try things out before mastering the concepts
8. Without clear thinking and understanding I will not dabble with the practicalities
9. I generally need to know that I am working under clear guidelines
10. I am quite content to try things out before I work them out
11. I like the opportunity to discover things myself in practice
12. I prefer to work on without advice until I feel that I am ready to request it

The following clusters of statements represent a tendency towards:

(1–3) An activist style

(4–6) A reflective style

(7–9) A theorist style

(10–12) A pragmatic style

If you examine where you placed your ticks (i.e. 'agree' or 'disagree'), you can work out what your preferred learning style is.

It may be optimal for you to bring all these together and use elements from them all, even if you have a preference for one or two. If you set your eyes on personal growth, then you will be prepared to experiment with different thinking styles and learning styles. In your approach to your learning, variety will keep freshness in your work and will stimulate your personal development, while you will always have your personal strengths and preferences to fall back on for insurance.

If you reflect a little, you will see that you can take the same content, substance and information as everyone else and put it across in a manner that is fresh, innovative and memorable.

2.10 Deeper form of learning

The goal of true education is deep learning (Biggs, 1999) and the opposite of this is shallow learning. Deep learning means that you make the best possible use of your resources in the most thoughtful manner.

THE CHARACTERISTICS OF SHALLOW LEARNING

- **Primary interest and focus is in the grade obtained (summative)**
- **Mechanical reproduction of material (memory work)**
- **Little interest in quality feedback**
- **Minimal motivation for the subject**
- **Little effort to stretch beyond the minimum required reading**
- **Procrastination in application to reading and revision**
- **Study is seen as little more than a passport to a job**
- **Suffers the kind of exam anxiety that arises from inadequate preparation**
- **Often content with learning at a descriptive level**

THE CHARACTERISTICS OF DEEP LEARNING

- **Values learning for its own sake**
- **Finds momentum from personal motivation**
- **Is seen a life-long process**
- **Interested in learning to learn**
- **Uses understanding as well as memory**
- **Sets units of learning within an overall context**
- **Focuses on how skills can be transferred across modules and over years**
- **Recognises the value of learning principles for employability**
- **Looks for formative and diagnostic feedback**
- **Targets independent learning to complement set exercises**
- **Enjoys the challenge of problem solving and critical thinking**

Exercise – As you reflect on the lessons of this chapter, what can you highlight to improve the quality of your learning? Write your own checklist.

✓ .....

✓ .....

✓ .....

✓ .....

✓ .....

SUMMARY

Chapter 2 summary points

- In all assessments aim for balance, criticism, evidence and structure
- Aim to avoid padding, mere description and dated material
- Pursue independent and problem-based learning
- Hold on to what works and let go of what doesn't
- Vary learning activities and find the styles that work best for you