

Helping students to concentrate while studying

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Summary

Concentration, or the ability to focus effectively on the task at hand while ignoring distractions, is vital for success in all areas of life – whether on the sports field or in the classroom.

Unfortunately, as focusing techniques are not normally taught in school, many students lack insight into the strengths and limitations of their concentration systems. Against this background, the purpose of the present article is to explore what we know about concentration from recent research on ‘cognitive psychology’ or the scientific study of mental processes such as thinking, paying attention and remembering. In particular, this article will address three main questions. Firstly, what exactly is ‘concentration’? Secondly, how does our concentration system work? Finally, what practical techniques can help students to concentrate more effectively when studying?

Keywords

Concentration, focusing, studying, learning, psychology

Introduction

Have you ever discovered suddenly that you've been reading the same sentence in a book over and over again without any comprehension because your mind was miles away? Do you often find yourself thinking of something else while someone is speaking to you? Have you ever felt embarrassed at a social gathering because you had forgotten the name of someone to whom you had been introduced just seconds earlier? If these examples of everyday cognitive failures sound familiar, then you have first-hand experience of losing your concentration. But what exactly is "concentration", why do we seem to lose it so easily, and perhaps most importantly of all, how can you help your students to focus effectively while they are studying?

The purpose of this article is to answer these questions using the principles and findings of cognitive psychology – the scientific study of mental processes such as thinking, paying attention and remembering. It is organized as follows. In the first part, I shall explore briefly the theory of concentration, explaining what it is and how it works. Then, in the second part, I'll try to translate theory into practice by providing seven practical tips on focusing more effectively when studying.

What is "concentration"? Introducing your mental spotlight

The ability to concentrate, or pay attention to the task at hand while ignoring distractions (Moran, 2012), is vital for successful performance in any area of life – whether in the classroom or on the playing field. For example, Alex Ferguson (former manager of Manchester United), one of the most successful coaches of all time, proclaimed that in soccer, "without question, at the top level, concentration is a big part of a players' game – whether they're a keeper or outfield" (cited in Northcroft, 2009, p. 12). Not surprisingly, a lapse in concentration can mean the difference between success and failure in competitive sport. To illustrate, consider what happened to the golfer Doug Sanders who missed a short putt (of less than a metre) that would have earned him victory at the 1970 British Open championship in St. Andrews, Scotland. This error not only prevented him from winning his first major golf tournament but also deprived him of an estimated *ten million pounds* in prize-money, tournament invitations and advertising endorsements. Remarkably, Sanders' miss was caused simply by thinking too far ahead - making a victory speech before the final putt had been taken. Specifically, as he revealed afterwards: "I made the mistake about thinking which section of the crowd I was going to bow to"! (cited in Moran, 2012, p. 148). Clearly, allowing one's mind to wander at the wrong time can be a very costly experience.

For cognitive psychologists, concentration is best understood as a mental spotlight that we shine at things that are important to us at any given moment. Put simply, it resembles the head-mounted torches that miners, divers, and spelunkers wear in dark environments. Wherever these explorers look, their target is illuminated. But our concentration system is more sophisticated than even the brightest head-mounted torch because we can shine our mental spotlight *inwards* as well as outwards. In other words, the targets of our concentration beam can be internal (e.g., as happens when we daydream while reading the same sentence again and again in a book) as well as external (e.g., taking notes from a teacher in class). This theory of concentration as a

mental spotlight has two important practical implications. Firstly, it shows us that concentration is never “lost” – only misdirected. To explain, our mental spotlight cannot disappear because it is always shining *somewhere*, either at an external target or an internal one. Secondly, spotlight theory suggests that whenever we shine our concentration beam at the “wrong” target (i.e., something that is irrelevant to the task at hand - as happened to Doug Sanders in the example above), we’ll become distracted and our performance will deteriorate. The lesson is clear. If we want to concentrate properly, we need to check regularly that our spotlight is shining on the task at hand not on some future outcome. Unfortunately, it’s difficult to stay focused for long because of the fragility of our “working memory” – the cognitive system that regulates the storage and manipulation of currently relevant information. For example, you’ll find it difficult to multiply 38 by 27 in your head because this calculation overloads your working memory resources. The practical implication of this finding is that we can consciously focus on only *one thought at a time* (Kremer & Moran, 2013). Given such cognitive limitations, and the fact that concentration techniques are not normally taught in school, what practical tips can help us to focus optimally while studying?

1. Write down a specific study question before you open your books

Most students think that reading is the same as studying. But they’re wrong. Studying is a more complex cognitive activity than reading. It involves reading with a *purpose* - to obtain specific answers to specific questions. For example, in Biology, “what is photosynthesis and how does it work”? In looking for specific answers to such questions, we’re *studying* not just reading. Asking questions promotes active learning in two ways. Firstly, it forces us to think carefully about what we are reading because we have to distinguish between relevant and irrelevant information. It’s relevant information if it helps us to answer our question (e.g., by giving us a definition of photosynthesis) but irrelevant otherwise. Secondly, questioning improves our concentration because it gives us a specific target at which to shine our mental spotlight. So, if we want to concentrate properly while studying, we **MUST** write down a specific study question before we open our textbook. Otherwise, our mental spotlight will drift and we’ll end up daydreaming rather than studying productively.

2. Develop a learning routine: Study at the same time in the same place every day

Have you ever noticed that as soon as you begin to study, you get an irresistible urge to do something irrelevant like tidying your notes or looking out the window? Learning is a habit. And like any other habit, it grows from a consistent and disciplined routine. So, to concentrate effectively, students need to develop a solid and reliable study routine. So, as guidance counsellors, it may be helpful to encourage your pupils to study at the same time and in the same place every day. Study routines have two main benefits. Firstly, they train our mind to associate studying with a particular place and time - which explains why we shouldn’t study in bed at night because of the danger of inadvertently conditioning ourselves to fall asleep over our books. Secondly, routines overcome inertia. As the psychologist William James observed over a century ago, it’s easier to *act* your way into a feeling than to *feel* your way into action! In other words, making a start on an assignment – even if we’re not in the mood to study – overcomes our natural laziness.

3. Study regularly but briefly – don't tax your concentration system

Develop the habit of studying in blocks of time which do not exceed our concentration span. In general, this means studying for about 3 blocks of 50 minutes each followed by a 5 minute review period at the end of the entire study session. During this quick review, students should ask themselves “What have I learned?” The ability to condense what we have learned into a few key points is a good test of our understanding of the material in question.

4. Keep your desk as tidy as possible – it's less distracting that way

We all prefer to work in tidy rather than cluttered environments. Therefore, we should encourage students to keep their desks as *workplaces* not as storage places. Otherwise, students will end up distracting themselves. A neat environment will encourage us to return to our place of study regularly whereas an untidy mess is distracting and unpleasant.

5. Dump your highlighter pens! Use summary sheets instead

As we read our textbooks or notes, we should make brief summaries on a sheet of paper (our “summary sheet”) of any information which seems relevant to our specific study questions. This condensed information will help us to prepare essays and exam answers. In this regard, we should discourage students from using such techniques as underlining and/or highlighting the material in their books because they do not *condense* the material that they wish to learn. As soon as we close our books, the underlined and highlighted text disappears. Remember that we are not *thinking* unless we are trying to distinguish between relevant and irrelevant material in our books/notes.

6. Reward yourself for study done – not for work avoided

If students lack motivation, they should give themselves a reward (e.g., watching a favourite TV programme) for successful completion of a study session. Research shows that activities which are followed by rewarding consequences tend to become rewarding in themselves. In other words, if you study for a reward, you will eventually learn to enjoy studying for its own sake.

7. Study in silence – because you'll be examined in silence.

Many students listen to music while they're working. But that's a bad idea because although studying with music in the background doesn't affect what goes into our mind, it *does* affect what comes *out* of it. To explain, research on the “state dependency” of learning shows that people remember things best when they recreate the conditions under which the material was originally learned. So, it's best to study in silent conditions simply because they will be examined in silence.

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Biography

Aidan Moran is Professor of Cognitive Psychology and Director of the Psychology Research Laboratory in University College Dublin. He is the author of a best-selling book *Managing Your Own Learning at University: A Practical Guide* (UCD Press, 2000) and two popular audiobooks: **Learn to Study** and **Learn to Concentrate** – both of which are available for download from MindCool Productions (<http://www.mindcool.com/>)