Article

LIVING WITH A CHAOTIC MIND

Amber Fraser-Smith

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INTRODUCTION

Picture yourself as the chief executive officer of a successful educational institute. Your head office has a team of workers who efficiently organise courses, plan and structure programmes and make sure operations run smoothly throughout the organisation. They know what needs to be done, when it needs to be finished and how this can be achieved in a logical and structured way. They complete their tasks, reflect on their work and apply changes where necessary. As a result, the whole organisation consistently functions well and success in all ventures seems likely.

Unfortunately, the chief executive in charge of the head office in a neighbouring body is having a somewhat different experience. In this office, the executive team appears to be rebelling. While most of them are brimming with enthusiasm and new ideas, the majority struggle to get started. Those who manage to start cannot prioritise the tasks and end up focusing on the least important parts, resulting in crucial deadlines being missed and stress levels rising. Meanwhile, another group with great potential has taken to long coffee breaks and hours spent gazing out the window. Dysfunction such as this can lead to an executive team that is destined to fail.

[Comments from a chaotic mind]: It has taken me an entire day to write this introduction. During that time, I have reworded it numerous times, lost my changes twice and gazed at the beautiful bay out my window for an indeterminable amount of time. Yet again. Years ago, in a desperate attempt to understand my chaotic mind, I enrolled in Psychology 111 and began a journey through the human brain.

The executive office occupies prime real estate in the brain. Situated in the prefrontal cortex – the part of the brain that sits behind your forehead – is the executive functioning 'suite': a set of cognitive processes and mental skills that includes attention, working memory, inhibition, motivation, planning and problem solving. Each of these areas needs to be functioning well to cope with everyday tasks such as goal setting, prioritising, remembering information, controlling emotions, assessing progress, adapting plans when necessary and completing tasks. When the executive functioning area is not working as efficiently or consistently as it should, completing tasks becomes considerably more difficult and the likelihood of a successful outcome falls.

The chaos that ensues in the executive functioning area of the brain has its own label: *executive dysfunction*. Most often associated with ADHD, this condition can also affect those who are autistic, those with traumatic brain injuries (McDonald et al., 2002) or those who binge-drink as an adolescent, largely due to the harm caused by alcohol on a developing prefrontal lobe (Parada et al., 2012). Executive dysfunction can negatively affect academic outcomes (Baars et al., 2015). Yet, many students are not aware that their learning issues could have a neurological basis and so attribute their difficulties to character weaknesses instead, which can damage self-esteem and increase stress levels (Cicerchia, n.d.).

I wish someone had helped me identify my executive dysfunction earlier in life and introduced me to strategies that would help the learning process. By seeking help from support services, reading extensively on how to learn and using the

superpower of sheer determination, I had success in my studies, but not without an ongoing struggle that led to increased stress levels. Did it have to be like that?

ASSESSING EXECUTIVE FUNCTIONING

When specific executive functioning issues are identified, support can be given in the form of information, opportunities for discussion and targeted interventions. Using a combination of these, students can learn more about their own executive functioning, identify and understand their personal strengths and weaknesses, and then find and share ways to help improve their learning skills. An assessment to identify specific executive areas can be done using self-report scales such as the BRIEF-A, the Behavior Rating Inventory of Executive Function – Adult version (Roth et al., 2005). Using a similar self-report scale, Baars et al. (2015) noted that students' own perceptions of their executive functioning helped them identify specific weaknesses early in their studies, thereby enabling suitable interventions to be used to assist learning. Meltzer and Krishnan (2007) supported the need for the early identification of executive dysfunction, claiming that the issues associated with it tended to become more apparent as students progressed through the education system and academic requirements became "more complex and conceptually demanding" (p. 80).

EXECUTIVE FUNCTIONING IN THE CLASSROOM

Executive functioning plays a huge role in tertiary education as it provides students with the skills they need to decide on, start, plan, assess and complete tasks. Just like members of the executive team who are not doing a job properly, the executive functioning area that is not functioning correctly may need some advice and training. Incorporating lessons on *how* to learn within the usual content-based lessons can help provide this training. By identifying executive functioning tasks that need work, teachers and students can look for ways to specifically target those areas. Finding appropriate strategies that help compensate for deficits in executive functioning can increase the likelihood of academic success (Baars et al., 2015). While many students who have reached higher education already know how to plan, prioritise and organise, a significant number will not have fully developed these essential skills. Given the increased amount of independent learning needed at a tertiary level, it is almost inevitable that these students will need some help to make this transition successfully. While some will actively seek help from student support services and gain access to advice and resources, many will not, leaving them to struggle, miss deadlines and experience stress, self-esteem issues and, for some, failure.

Stress has been a loyal companion on my learning journey. I have an innate curiosity about the world and a strong desire to learn, but find it exceptionally difficult to start tasks. By the time I start, the deadline is looming, and last-minute pressure heightens my anxiety, resulting in brain fog, a further loss of self-esteem and – in the past – a self-given label of 'hopeless.'

OVERCOMING NEGATIVE SELF-BELIEFS

Low self-esteem is common in those who experience executive dysfunction on a regular basis. Most students with learning issues, such as executive dysfunction, arrive in the tertiary classroom having already experienced difficulties in the academic environment and, as a result, may begin their new learning experience lacking in both confidence and self-esteem. To help counter these negative self-beliefs, students need the opportunity to identify the strengths that they bring with them on their learning journey. This could be achieved through looking at their past successes, discussing how they have dealt with problems previously or analysing character strengths they possess that support resilience. They may also benefit from considering the cultural and societal factors that make some traits valued and suitable in one environment, but seen in a negative light in another. In one example given in the book *The Power of Neurodiversity: Unleashing the Advantages of your Differently Wired Brain*, Thomas Armstrong (2011) draws attention to the similarities between distractibility, which those with pre-frontal issues

often have, and creativity. He points out that in the classroom, distractibility comes with a negative label, while "with the creative person this [distractibility] is called having a divergent mind and is seen as one of the hallmarks of a great mind" (p. 40).

After identifying weaknesses and strengths, students and teachers can work together to find strategies to deal with the elements of executive functioning that are causing problems. To start this process, Gaskins and Pressley (2007) recommend an instructional approach that includes "explaining strategies, discussing how the brain works, modelling self-talk, orchestrating self-assessment, and encouraging students to monitor and control person, situation, task, and text variables" (p. 280), adding that this process needs to be accompanied by explanations of each stage and scaffolded practice opportunities. Guidance and support such as this is helpful in what Moran and Gardner (2007) term the apprentice stage, where the student learns the skills needed to function well in society. Nevertheless, the ultimate aim is to empower students to become more autonomous in their learning by finding and using the strategies that work well for them.

To this end, the Māori concept of ako is the ideal way to share ideas and learn from others. Ako represents a reciprocal relationship where it is recognised that both students and teachers bring knowledge and experience to a learning environment, and this can be combined to bring about new knowledge and ways of understanding. In collaborative sessions, students and teachers can discuss their own learning strategies, the effectiveness of each strategy and ways to adapt them as necessary. The use of ako helps empower students by giving them the opportunity to share their own knowledge and experience, find solutions to their own problems and help other students on their learning journeys.

I could have used some strategies to help with the organisation of materials while studying for my Master's degree. I wrote copious notes in various notebooks and on random pieces of paper that I left throughout the house. Two years down the track, I am still discovering notes that would have been useful in my thesis.

STRATEGIES FOR LEARNING SUCCESS

The following strategies come from a range of sources – educational, psychological and neuroscientific research, personal experience and anecdotal evidence. They are shared here as a starting point, with the hope they will be tried by students and teachers, discussed and adapted to suit.

Organising the chaotic mind

For the chaotic mind, starting each semester with strategies for organising materials can be hugely beneficial. Learning ways to find, file and assimilate new information early in a course can help students keep on top of their materials, easing pressure further down the track. Developing an efficient and consistent filing system, whether this is electronic or paper-based, is particularly helpful early in the semester before paperwork gets out of control. For some, clear folders to hold loose papers can save a considerable amount of time searching for information, as can adding colour coding to files or having one exercise book per subject. Time management skills are equally important at this stage so that, using wall calendars, diaries and schedulers, students can practise dividing their week and days to better schedule classes, independent study, work and family commitments. This skill can be further developed by encouraging students to assign times to tasks and then later check how accurate their estimates were, adapting these as necessary.

Initiation and procrastination

Starting assignments can be a major hurdle for some students. Procrastination is prevalent in the academic world and while it can be easy to label procrastinators as lazy, Rabin et al. (2011) found a strong correlation between

academic procrastination and executive functioning issues. They pointed out that people with issues in this part of the brain usually have the desire to do the task, but lack the ability to get started. Ongoing procrastination can lead to a host of negative consequences including stress, low self-esteem and a reduced likelihood of academic success.

Incorporating planning time into the curriculum can help students learn ways to overcome procrastination problems. An example of this might be a weekly 15-minute session where assessments and study tasks are discussed in class, in groups or one-to-one. The time could be used to help students gain an understanding of the tasks they need to complete, including how to break goals into sub-goals, how to meet requirements by using the provided rubrics and how to prioritise tasks. By practising these skills with their own assessments, students can gain a better understanding of the processes involved in completing a task, improve their time management and organisational skills, and increase their confidence to work more autonomously in the future.

Students who normally delay starting a task may find the Pomodoro Technique useful. This method involves choosing a task, setting a timer for 25 minutes, working consistently on the task during that time and then having a break for about five minutes. The idea came from Francesco Cirillo, an Italian university student who was struggling with his own low levels of productivity and lack of focus. Using a timer the shape of a tomato (pomodoro in Italian), he challenged himself to work for a set amount of time. After practice and adaptation, he developed the Pomodoro Technique to help increase motivation, improve focus and reduce anxiety (Cirillo, 2006).

A few days before this article is due, I ask for an extension. Given the topic of the article, I feel like crawling under the desk. I breathe a sigh of relief when met with a sympathetic response, but still feel embarrassed. I had delayed beginning the article and when some unexpected events occurred in my life, I was unprepared and fell behind in my writing. Even with a generous extension, I can feel the pressure increase. Sometimes life throws curveballs, and I need strategies to help me deal with them more effectively.

Learning to self-monitor

It is a simple fact that plans change. Self-monitoring is the ability to assess a plan, determine how well it is going and adapt it as necessary. It is a particularly valuable skill for those who wish to avoid making the same mistakes repeatedly, wasting time or going off on a tangent. Having some advice on how to self-monitor can help those who get distracted to stay on track, rather than heading off in the wrong direction. It can also help those who persevere with plans that are not working. Progress checks could be incorporated into class time, with students meeting in study groups to discuss aspects of their assignments and their progress, as well as strategies for any problems that may have occurred.

Another option is for students to meet one-to-one with a support person. Just as a chief executive officer can benefit from having a coach, those with executive functioning issues can find it helpful to have someone to support them on their learning journey. Known in some circles as an accountability partner, this can be a peer, a mentor or a coach. According to Ahmann et al. (2018), having a coach or study partner not only helps students stay focused and on track, but can help raise their self-esteem and improve their personal well-being. Use of a coach has been shown to be particularly effective when the coach has received training beforehand and uses questioning techniques to help students find more constructive ways of working. Though training is beneficial, working with a peer can be one way of staying accountable without feeling dependent. The peers can meet in person or call each other to discuss their individual plans for a set period. They then work during that time and meet or call each other again at the end to check on progress.

Having a peer support system has been the most effective solution for my executive functioning issues – both in study and in work situations. A friend and I call each other, discuss our plans for the allotted time and then later measure our progress. To avoid embarrassment, I work hard to achieve all I said I would. I wish I had thought to use this method with this article.

Technology use

Advances in technology have led to a vast array of computer programs and apps that can both help and hinder effective learning. Students should be introduced to and encouraged to use assistive technology, a form of technology designed specifically to assist with learning. Smart phones and watches, voice recorders and electronic organisers can be used to issue reminders, record messages and help organise appointments to ensure they are not forgotten (Dewar et al., 2014). Other apps can help by allowing users to specify times on each website used, block websites that are overly distracting and provide mindfulness bells to bring attention back to the task at hand (Ester, 2016). Given the high levels of technological literacy in tertiary students, many will already be using some form of technology to assist with their studying and can therefore share details of apps or programs they have found useful.

Technology is a nightmare for me. Over the many years I have studied, distraction has caused me to lose countless documents. Even with OneDrive and its wonderful auto-save feature, I lost hours of work I had done on this article. I obviously still have a lot to learn.

Memory training

Learning and processing new information becomes even more of a challenge for those experiencing issues with working memory, the memory system that holds information temporarily while you are doing a task that needs it. We use it for a variety of tasks including to follow instructions, recall rules of games and remember the details of what we have just read in order to follow the ideas and/or story. Without a functional working memory, studying successfully is considerably more difficult. For those who experience memory issues, it can feel like the required information has gone in one ear (or eye) and straight out the other, leaving them feeling lost, frustrated and embarrassed. Learning strategies – such as the use of mnemonics and mental imagery (Carretti et al., 2007) – and use of assistive technology can help compensate for issues in this area. There are many claims that working memory can also be permanently improved using memory games and online brain training exercises; however, the results of research in this area are controversial and contested (Makin, 2016).

I have been writing for hours. I can see that the structure of my writing needs work, but my thoughts are going round in circles, as well as flying from the past into the future without so much as a stopover in the present. I know my mind needs a rest in order to see more clearly. In the past, I tried meditation without much success, and then I found mindfulness.

Mindfulness

When living with chaos, a sense of calm is one of the ultimate goals. Yet, many chaotic minds struggle to stay in one place. A mindfulness practice can help by enhancing attention, helping to provide balance and increasing self-efficacy (McCloskey, 2015). Mindfulness is the practice of staying present in the moment and focusing on your senses rather than letting thoughts wander into the future or languish in the past. The practice gives the brain time to take a break from relentless cycles of worry and rumination. McCloskey found that a regular practice could help students focus on their feelings and find ways to manage them without getting distracted. In research on the use of mindfulness in higher education, Mackenzie (2015) found additional benefits included better sleep, improved mental well-being, greater creativity and better academic results.

CONCLUSION

> Education … is not the learning of many facts, but the training of the mind to think.
> – Albert Einstein, *Einstein: His Life and Times* (1948)

Using the mind well is the foundation of education. The executive office scenarios at the beginning of this article are analogies of the extremes – functional and dysfunctional. Yet, all head offices need some form of training to give them the best chance of success. While sometimes that training needs to offer general office management skills, at other times it needs to be focused on specific administrative elements such as organising materials or setting priorities.

Issues in the executive functioning area of the brain can be a major impediment to academic success at a tertiary level. However, if students and teachers are made aware of these issues, they can be addressed on both an individual and group level. Using ako, strategies can be introduced and discussed, enabling students to learn different ways to deal with challenges they encounter on their learning journey, as well as share ideas that help others.

Whether it is through a weekly meeting with a coach; using assistive technology; learning memory techniques; practising time management; or simply finding ways to find and file information, identifying strategies for success can make the difference between a functional head office and one where things rapidly fall apart. While stress is an almost inevitable part of both study and life, it does not need to mean the difference between success and failure. Stress-reduction strategies, such as a regular mindfulness practice, can improve focus and increase mental well-being, offering a greater chance of academic success.

As usual, I work right up to my deadline. Despite the lost words and time, frustration and exhaustion, I feel that I have learned a lot about my executive functioning issues from writing this article, and I know what to do differently next time. Whether I do it or not remains to be seen. Nevertheless, even though I often curse my chaotic mind, I have developed greater acceptance of it. As philosopher Friedrich Nietzsche once said in Thus Spake Zarathustra*, "One must have chaos within to release a dancing star."*

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