

During a time when the boundaries between our work and our personal lives feel tenuous at best, multitasking feels like a natural solution.

Working from home means juggling Zoom calls and coworker Slacks and deadlines—not to mention interruptions from your kids or spouse or roommates. Sometimes it's impossible to focus on just one task at a time. It can feel great to half-listen in a meeting while also messaging a teammate to get an update on that project. Look at you, getting twice as much done! But there are lots of times where multitasking can actually set you back at work.

More than just power-walking while chatting to a friend, or preparing dinner and listening to an audiobook, multitasking at work often involves attempting to complete two cognitively demanding activities simultaneously.

The ability to switch between tasks often makes you feel like you're getting a lot done, but several studies have shown that this constant routine of switching gears isn't an effective way to make progress and can take a toll on our brains. Not only can this habit sap your energy, but constant multitasking can make it seem more appealing, creating an addictive cycle.

In fact, some experts say if you're unable to sit down and do deep work, it may be time to consider if you're in the right job. Feeling fulfilled in a role is one thing, but if you can't even concentrate, that may not be a good sign for long-term professional progress.

Obviously there are times during this pandemic where we all have to multitask, especially if you're a parent. But there also may be times where you're opting to do multiple tasks simultaneously when it's actually the less efficient choice. Understanding these three common multitasking myths can help you manage your time more productively:

1. YOU FEEL A SENSE OF ACCOMPLISHMENT, SO YOU MUST BE GETTING A LOT DONE.

Hate to break it to you, multitaskers: This feeling of accomplishment is a false sensation.

Multitaskers often get addicted to this cycle of small-scale accomplishment (and usually executed at a suboptimal level) without realizing they are spending more time completing their work than if they had chosen to stick to one task.

The singular approach is called monotasking—which means cutting out the jumping around and focusing deeply on just one project.

2. YOU SAVE ENERGY BY SWITCHING BETWEEN TASKS.

The truth is that when you force yourself to shift from one mentally taxing job to another, you are not only wasting time but also draining your energy reserves.

Moreover, when you quickly pivot to the next "to-do" item, you leave the phantom-like presence of the last task in your thoughts. This is called "attention residue," which is as unappealing as it sounds. Basically it's the idea that although you have moved on to your next task, your brain is left contemplating the previous one.

Here's an unsettling fact: Even a quick glance between an article you're reading to your inbox can "drastically reduce your cognitive function," Cal Newport, a computer science professor at Georgetown University, tells *Fast Company*.

3. YOU GET BETTER AT MULTITASKING THE MORE YOU DO IT.

Fast Company reporter and editor Lydia Dishman confesses to being a reformed multitasker. While working to wean herself off multitasking, she realized that it was a much more difficult habit to cut out, especially with assorted forms of technology competing for our attention (and offering us resulting instant gratification).

We can only successfully perform simple, rote tasks when multitasking. As *Fast Company* contributor Art Markman points out, nonchallenging, intellectually simpler tasks are usually okay to juggle at once; these are often habitual activities that don't overly tax the working memory.

But for more demanding, complex tasks, it's important to direct your best self toward these efforts, or suffer the consequences of poor performance.

If you are attempting to complete two tasks at once, it's a far-fetched idea to think both will result in fantastic work. Says Markman, "You'll likely get worse at both of them."

According to research from Stanford, the more people multitask, the more they are training their brains to be scattered, and the less they are able to be creative or develop emotional intelligence. In some cases, it can even drop your IQ by multiple points, so that your brain becomes as well-performing as an 8-year-old's.

Mind mapping has an almost unlimited number of uses – any process which requires information or organization can benefit from this technique. Here are a few of the use cases that we will be discussing in this class:

- **Brainstorming** – Individual and group brainstorming sessions respond positively to the free flowing structure of mind mapping, allowing ideas to jump around among topics and at the same time be organized and structured
- **“To Do” Lists** – If standard “to do” lists don’t seem to be working for you, try this method.
- **Writing** - Whether you are organizing content for a report or exploring a character for a new novel, mind mapping will help you bring depth and richness to your writing. Because it allows you to get into the material so quickly.
- **Thinking** – Organizing your thoughts, scenario thinking, preparing blueprints for writing articles or reports all are examples of effective elements for good thinking
- **Presentations** – Mind mapping makes it easy to prepare presentations and speeches. You can deliver your presentation in a structured way i.e. in a format that shows the overall structure of your subject. This helps your audience to understand and remember more of your presentation.
- **Project Organization** – Mind mapping is an excellent way to begin “chunking” down a project. You can create a basic structure of any project mapped out in just a few minutes. The project mindmap can show large categories, subsequently broken down into smaller pieces, allowing easy assigning resources, budgeting and estimating timing. Progress, financial aspects and deliverables can be managed professionally when using modern mind map applications on the computer.
- **Managing Meetings** – Many working hours are spent on meetings. Mind mapping offers a way to make this time more productive. Arranging agenda items around the meeting’s goal helps participants to focus to the subjects to be discussed. Conclusions and action items can be added in a structured way and easily shared between stakeholders afterwards.
- **Note Taking** – This visually interesting method of note taking allows you to organize information as you receive it, add connections and associations, and increase retention of the information. Note taking can be done fast and effective.
- **Personal Growth** – Mind mapping can tap into our deepest thoughts and provides an effective method of discovering our inner selves.
- **Knowledge Management** – Gathering and consolidating information from different research sources, capturing and sharing this information make mind mapping a valuable tool for today’s knowledge workers.

One possible remedy for handling information overload is consistent use of the ACTE formula. At every trigger that we receive, we immediately take one of four actions of the ACTE formula.

1. ACT = action

If at all possible, take action immediately. This provides a pleasant feeling of completion and means the task does not have to float around in your subconscious as one of those things that still need doing.

This 'do it now' principle also functions fantastically well from a service point of view. Of course, it is not always possible because we may need information from others or have to investigate something further. Approximately ten percent of all the triggers that we receive can be dealt with immediately.

2. CLASSIFY = later action

If you are unable to take immediate action, make a note for later action to be taken, specifying its priority (in other words, classify). Putting this on your to-do list or leaving a message on your voice recorder means that it no longer bothers your subconscious as a loose item that keeps floating up making you think 'oh yes, I still need to do that as well...' Simply making a note for later because you no longer need to think about it or fear that you might forget about it.

Classifying will be possible for about twenty percent of triggers. If you do need to wait to deal with the matter because you do need to wait to deal with the matter because you need information from other people, a tickler file or daily can be a very good tool..

3. TRANSIT = forward

Transmit means forwarding the task to someone else to deal with or to see before you deal with it. In other words: away with it! Do it immediately. Make sure you understand the rules that apply to delegating before doing it.

About 30 percent of the triggers that disturb us are not intended for us, which means that we can forward them without delay. It is vital to do this the moment the trigger appears.

4. ELIMINATE = out it goes

An awful lot of information that reaches us in whatever way possible is not relevant. In particular, when we have good and concrete objectives, we are generally capable of deciding quickly whether information should penetrate our self-made filter system or not. If the answer is no, then out it goes. The advantage of using effective reading techniques here is that information can be scanned very fast to find out whether it holds anything we might be able to use, so that we have at least seen everything.

In about 40 percent of cases, it turns out that the information is of no importance to us and can be discarded immediately. This should, once again, be done without delay. Do not put things on piles that can be checked when you have a moment, because that moment will probably never come. Some people put these things on piles they take home, so they can check everything at their leisure. Once home, there are all sorts of reasons for not achieving this and the pile comes back to the office again and so on.

It is recommended that you deal with every trigger immediately, which means:

- Take action immediately (10 percent)
- Note for later action (20 percent)
- Pass on to someone else (30 percent)
- Throw out (40 percent)

Every piece of paper, every e-mail, is treated the same way, which means we will usually only have to handle it once.

Do not put any stacks of mail, Post-it notes and so on within range on your desk; rather, put them behind you. Because every time our eyes catch sight of the stack or the notes of things we still have to do, this is another trigger. Put all those things out of sight and work consistently on a single case or paper at any given time, at an empty desk, in conformity with the ACTE principle.

They come, they learn, they forget

Today's knowledge workers are being asked to learn more in less time. Yet most training organizations have not adapted to meet this reality. They continue to rely on the way they have always done things, spiced up perhaps, by the use of technology and mobile devices, but still developing and delivering traditional time-compressed, information over-loaded live training events. At best they may add some online learning modules and performance support tools to the mix. They make a significant investment to provide this training – as much as \$25,000 annually for high level sales professionals – because they assume that what their learners learn by attending an event or by flipping through an eLearning course can and will be recalled and applied when they are back at their jobs.

Unfortunately, the research shows that these learners will forget much of what they have learned. Most studies peg knowledge loss at 70% to 90% within three months of a training event. And you surely can't use what you don't remember. Yet, it's not the quality of the training that's the problem. The instructors can be wonderful; the content rich and well designed. The problem is that the training method itself isn't conducive to the way people actually store what they've learned into long term memory.

A breakthrough in learning at Harvard Medical School

As a professor of surgery at Harvard, Dr. B. Price Kerfoot faced this problem head on: his students were forgetting much of what they had learned in his classes after only a few weeks. This tendency, first identified as the "forgetting curve" by Dr. Hermann Ebbinghaus in 1885, concerned Dr. Kerfoot as it didn't bode well for his students' results on their final exams, and more importantly, for their future performance in clinical practice.

Dr. Kerfoot, who also holds a master's degree in education, looked into the research and began thinking about how to apply two well-known psychological phenomena to this problem; namely, the spacing effect and the testing effect.

The spacing effect postulates that information is more easily learned and remembered when it is presented and repeated a few times, but spaced over a long time span rather than studied intensively in a short time span. Basically, it's like doing your homework regularly and studying your notes repeatedly over the course of a whole semester rather than cramming for the final exam the night before.

The testing effect refers to the higher probability of recalling an item over the long term when a learner is tested in a way that requires repeated retrieval of the item from memory. As opposed to concentrated study of an item, formative testing, as it is sometimes called, more effectively facilitates the transfer of newly acquired knowledge from short-term into long-term memory. If you've ever been asked a question, and replied, "wait, wait, don't tell me" as you groped for the answer, you know how the testing effect works.

So, Dr. Kerfoot began experimenting with web delivery of training content in the form of questions and answers. He programmed algorithms into the delivery system so it would know when and how often a learner should be asked a question. He originally called this unique blend of the two effects and the web delivery system, "spaced education". He and his colleagues at Harvard have conducted more than 15 randomized controlled trials involving over 5,000 participants using spaced education. The results have been impressive and convincing:

- Among a sample of 1,067 medical students those using spaced education increased knowledge retention by 170% over traditional e-learning modules.

- Among a sample of 524 physicians those using spaced education retained knowledge for over two years compared to 30 days among those using text-based self-study.
- As a result of using spaced education among 95 urologists the number of unnecessary cancer screenings were reduced by 40%.
- Spaced education learners in all trials showed higher levels of engagement with average completion rates higher than 70%.
- Among a sample of 724 physicians, spaced education was preferred over web-based modules by a margin of 3:1.

Summary

Dr. Kerfoot's development of spaced education provides a powerful new learning methodology for today's knowledge workers. While the results of his randomized control tests focused primarily on medical students and physicians, similar results are now being realized among other audiences, especially sales professionals in the pharmaceutical and life sciences sectors. Since spaced education is based on the science of learning as it applies generally to human psychology, it should not be surprising that similar improvements in learner engagement, retention, and performance are being seen elsewhere.

Pink's persuasive theory on what motivates us – in work, school and in our personal lives – is backed by four decades of solid scientific research on human motivation, and highlights an extreme mismatch between the human capital practices that businesses use that the practices that really work.

The 20th Century Motivation Model

In the early 1900's, the practice of scientific management was born. The brainchild of Fredrick Winslow Taylor, scientific management was based on the premise that all work consisted largely of simple, uninteresting tasks, and that the only viable method to get people to undertake these tasks was to incentivize them properly and monitor them carefully.

Put simply, in order to get as much productivity out of your workers as possible, you must reward the behavior you seek, and punish the behavior you discourage – otherwise known as the carrot-and-stick approach.

This theory assumes that the main drive which powers human behavior is the drive to respond to rewards and punishments in our environment. As Pink notes, this suggests “human beings aren't much different from horses – that the way to get us moving in the right direction is by dangling a crunchier carrot or wielding a sharper stick.”

However, scientists began to encounter situations during their experiments where the reward-punishment drive wasn't producing the expected performance results. This led to the discovery of a possible *third drive* for human behavior.

The Third Drive

Scientists have long known that two main drives power human behavior – the biological drive including hunger, thirst and sex and the reward-punishment drive already discussed. However in 1949, Harry F. Harlow professor of Psychology at the University of Wisconsin, argued for a third drive – intrinsic motivation – the joy of the task itself.

His theory was based on studies of primate behavior when solving puzzles. Harlow found that when presented with a puzzle, monkeys seemed to enjoy solving the puzzles without the presence or expectation of rewards. He found these monkeys, driven by intrinsic motivation, solved the puzzles quicker and more accurately than monkeys who received food rewards.

Edward Deci, a university psychology graduate student, went on to replicate these findings with humans in 1969, concluding that human beings have an “inherent tendency to seek out novelty and challenges, to extend and exercise their capabilities, to explore, and to learn.”

Why the Carrot-and-Stick Approach Doesn't Always Work

Studies such as the ones mentioned previously demonstrated that the carrot-and-stick approach was flawed. It worked well for some tasks, but not others. Why?

The carrot-and-stick approach worked well for typical tasks of the early 20th century – routine, unchallenging and highly controlled. For these tasks, where the process is straightforward and lateral thinking is not required, rewards can provide a small motivational boost without any harmful side effects.

But jobs in the 21st century have changed dramatically. They have become more complex, more interesting and more self-directed, and this is where the carrot-and-stick approach has become unstuck.

Pink demonstrates that with the complex and more creative style of 21st century jobs, traditional rewards can actually lead to less of what is wanted and more of what is not wanted.

He provides ample evidence to support the notion that this traditional approach can result in:

- Diminished intrinsic motivation (the third drive);
- Lower performance;
- Less creativity;
- “Crowding out” of good behavior;
- Unethical behavior;
- Addictions; and
- Short-term thinking.

There are a number of studies cited in the book, and it makes for interesting reading if you can spare a few moments to read the book, but let me use one example to illustrate his claim about rewards leading to reduced performance and creativity.

A New Theory of Motivation

So, what to do with all this scientific information? Pink proposes that businesses should adopt a revised approach to motivation which fits more closely with modern jobs and businesses, one based on self-determination theory (SDT).

SDT proposes that human beings have an innate drive to be autonomous, self-determined and connected to one another, and that when that drive is liberated, people achieve more and live richer lives.

Organizations should focus on these drives when managing their human capital by creating settings which focus on our innate need to direct our own lives (autonomy), to learn and create new things (mastery), and to do better by ourselves and our world (purpose).

Here are a few initiatives that fit with Pink’s revised motivation theory which will assist your organization motivate its employees in the correct way:

Autonomy – provide employees with autonomy over some (or all) of the four main aspects of work:

- **When they do it (time)** – Consider switching to a ROWE (results-only work environment) which focuses more on the output (result) rather than the time/schedule, allowing employees to have flexibility over when they complete tasks.
- **How they do it (technique)** – Don’t dictate how employees should complete their tasks. Provide initial guidance and then allow them to tackle the project in the way they see fit rather than having to follow a strict procedure.

- **Whom they do it with (team)** – Although this can be the hardest form of autonomy to embrace, allow employees some choice over who they work with. If it would be inappropriate to involve them in the recruitment/selection process, instead allow employees to work on open-source projects where they have the ability to assemble their own teams.
- **What they do (task)** - Allow employees to have regular ‘creative’ days where they can work on any project/problem they wish – there is empirical evidence which shows that many new initiatives are often generated during this ‘creative free time’.

Mastery – allow employees to become better at something that matters to them:

- **Provide “Goldilocks tasks”** – Pink uses the term “Goldilocks tasks” to describe those tasks which are neither overly difficult nor overly simple – these tasks allow employees to extend themselves and develop their skills further. The risk of providing tasks that fall short of an employee’s capabilities is boredom, and the risk of providing tasks that exceed their capabilities is anxiety.
- **Create an environment where mastery is possible** – to foster an environment of learning and development, four essentials are required – autonomy, clear goals, immediate feedback and Goldilocks tasks.

Purpose – take steps to fulfill employees’ natural desire to contribute to a cause greater and more enduring than themselves:

- **Communicate the purpose** – make sure employees know and understand the organization’s purpose goals not just its profit goals. Employees, who understand the purpose and vision of their organization and how their individual roles contribute to this purpose, are more likely to be satisfied in their work.
- **Place equal emphasis on purpose maximization as you do on profit maximization** – research shows that the attainment of profit goals has no impact on a person’s well-being and actually contributes to their ill-being. Organizational and individual goals should focus on purpose as well as profit. Many successful companies are now using profit as the catalyst to pursuing purpose, rather than the objective.
- **Use purpose-oriented words** – talk about the organization as a united team by using words such as “us” and “we”, this will inspire employees to talk about the organization in the same way and feel a part of the greater cause.

The notion of increasing employee satisfaction through the intrinsic motivational methods of autonomy, master and purpose has obvious implications for remuneration models and incentive schemes traditionally used by organizations.