

3 Results

The Pomodoro Technique has been successfully applied in various types of activities: organizing work and study habits, writing books, drafting technical reports, preparing presentations, and managing projects, meetings, events, conferences, and training courses. Here are some observations that have emerged from the experience of people and teams who have applied the Pomodoro Technique.

3.1 Learning Time

It takes no time at all to apply the Pomodoro Technique. Mastering the Technique takes from seven to twenty days of constant application. If used in pairs or teams, it's easier to implement the technique consistently.

Note Experience shows that applying the Technique in teams or organizing work in pairs results in less learning time and more consistent results. In these cases, each pair works with their own Pomodoro.

3.2 The Length of the Pomodoro

In terms of how long a Pomodoro lasts, two forces have to be kept in balance to maximize effectiveness:

- The Pomodoro has to represent an effective atomic measure of work. In other words, the Pomodoro has to measure equal units of continuous effort; as such these units are comparable with others. The problem is that, as everyone knows, all time is not equal in terms of the output of effort. All months aren't equal: December is shorter in terms of number of productive days and so is August in Mediterranean countries. Likewise, all the weeks in a month aren't equal: we don't give the same effort every single week. All the days in a week aren't equal: some days you can work 8 hours, others only 5 if you need to travel or go to the dentist; in still other days you may work 10 or 12 hours (less often, hopefully). Even all the hours in a day aren't equal: not every hour produces the same amount of effort, mostly because of interruptions. As a unit of measure, much smaller time intervals such as 10 minutes might not be interrupted, but they don't allow us to achieve appreciable results, and tracking becomes much too intrusive. So as far as this first force, half an hour seems to be ideal.
- The Pomodoro has to encourage consciousness, concentration, and clear-minded thinking. It's been proven that 20- to 45-minute time intervals can maximize our attention and mental activity, if followed by a short break (15).

In light of these two forces, we've come to consider the ideal Pomodoro as 20 – 35 minutes long, 40 minutes at the most. Experience shows that the Pomodoro Technique works best with 30-minute time periods.

Note In various work groups which experimented with the Pomodoro Technique in mentoring activities, each team was allowed to choose the length of their own Pomodoro on the condition that this choice had to be based on observations regarding effectiveness. Generally, the teams started off with hour-long Pomodoros (25 minutes seemed too short at first), then moved to 2 hours, then down to 45 minutes, then 10, till they finally settled on 30 minutes.

3.3 Varying the Length of Breaks

The length of breaks depends on the how tired you feel. Breaks at the end of a set should last from 15 to 30 minutes. For example, if you've kept up an intense rhythm throughout the whole day, at the end of the next to last set of Pomodoros your break will naturally last 25 minutes. If

you have to solve a very complicated problem, you'll need a 25-minute break between every set. If you're especially tired, it's possible and even beneficial to lengthen breaks between sets every so often. But breaks that consistently exceed 30 minutes risk interrupting the rhythm between sets of Pomodoros. More importantly, this sets off an alarm signaling the need for rest and free time!

It would be a serious mistake to take shorter breaks between sets because you're under pressure. Your mind needs time to integrate and get ready to receive new information to solve the upcoming problems in the next Pomodoro. Taking a shorter break because you're in a rush could lead to a mental block in finding solutions.

Note For beginners, once the last Pomodoro in the set of four is up, it's a good idea to set the timer for 25 minutes and start the break. The aim here isn't to rigidly impose 25 minutes, but to ensure you don't go over 30 minutes of break time. This should be done only at the beginning. In time, you'll realize how tired you are and understand when you're refreshed and ready to start again.

The same can be said for breaks between Pomodoros, which should be no less than 3-5 minutes. When you're especially tired, you can stop working for up to 10 minutes. Remember, though, that downtime between Pomodoros that consistently lasts more than 5-10 minutes risks breaking the rhythm between Pomodoros. It would be better to finish the current set and take a 15-30 minute break. The best way to manage your resources is to work strategically, first increasing the breaks between sets, and then extending the breaks between Pomodoros, if need be.

The most fitting metaphor for managing breaks is long-distance runners. At the start of the marathon, they know they have the energy to run faster, but they also know their limits and the difficulty of the challenge ahead. They manage their resources to achieve the best result at the finish line.

3.4 A Different Perception of Time

The first benefit that comes from applying the Pomodoro Technique, which is already apparent in the first few days, is sharper focus and concentration that comes from a different perception of time. This new perception of time that passes seems to elicit the following sensations:

1. The first 25-minute Pomodoros seem to pass more slowly.
2. After a few days of constant application of the Pomodoro, users say they can actually feel the mid-way point of the 25 minutes.
3. By the end of the first week of constant application of the Pomodoro, users say they can actually feel when 5 minutes are left on the Pomodoro. In fact, many people report having some sense of fatigue during these final minutes.

We can stimulate this ability to feel time in a different way by means of a series of exercises which serve to enhance consciousness of passing time among Pomodoro users. This different awareness of the passage of time seems to lead Pomodoro users to a higher level of concentration in performing the activity at hand.

3.5 Sounds of the Pomodoro

The Pomodoro emits two sounds: it ticks and it rings (after 25 minutes). As regards these sounds, there are several things to consider from two different perspectives: Pomodoros users, and people sharing the same work space with Pomodoro users.

3.5.1 People Who Use the Pomodoro

Let's first consider Pomodoro users. When they start applying the Pomodoro Technique, the ticking and ringing can be annoying. There are various ways to make these sounds softer, but experience shows that in time (even with just a few days of constant application) two things happen:

- The ticking becomes a calming sound. "It's ticking and I'm working and everything's fine."

- After a while, users don't even hear the ring because their level of concentration is so high. In fact, not hearing the Pomodoro ring actually becomes a real problem in some cases.
- Clearly the different sensations that are elicited by the same sounds are signs of a profound change in the perception of time that passes.

3.5.2 People Who are Subject to the Pomodoro

Now consider people who have to "put up with" the Pomodoro. This situation would arise when the Technique is used in a shared space, for example study halls at a university or an open space work environment. To respect the people who don't use the Pomodoro, a number of solutions have been tested. In order of effectiveness, there are: watches that count down 25 minutes and then flash or beep softly; cell phones with software applications that vibrate or make the display flash (for example the PomodoroMobile by XPLabs); kitchen timers with muted rings; Pomodoro computer software, aka soft-Pomodoro (first among these is the JTomato by Bruno Bossola). The ticking and ringing of several Pomodoros in an environment where a team is using the Pomodoro Technique isn't considered bothersome.

3.6 Shapes of the Pomodoro

Obviously, the kitchen timer you use doesn't have to be shaped like a tomato. Apples, pears, oranges, toasters, cooks, spheres, and UFOs: the market for timers is a varied as it is upbeat. Choosing your own Pomodoro (or we should say timer) makes the Technique more enjoyable and more accessible.

3.7 Ring Anxiety

With the first few Pomodoros when learning the Technique, there may be some anxiety from the feeling of being controlled by the Pomodoro. Experience shows that this feeling mainly emerges in two cases:

- among people who are not used to self-discipline
- among people who are very oriented toward achieving results

In both cases, it will prove difficult to concentrate on the primary objective of the Technique: empowering each person to improve his or her work or study process through self-observation.

For people who aren't used to self-discipline, ring anxiety generally comes from the fear that the Pomodoro Technique might be used to externally monitor their progress. It's important to stress that the aim of the Technique is not to carry out any sort of external analysis or control. With the Pomodoro Technique, there is no inspector who monitors workers' hours and methods in a Tayloristic fashion. The Pomodoro Technique mustn't be misconstrued as a form of this kind of external control. Instead, the Pomodoro Technique was created to satisfy the personal need to improve, and it has to be applied spontaneously.

Cases of results-oriented people are more common. If every tick seems like an invitation to work quickly, if every tock repeats the question, "Am I going fast enough?" these are signs of full immersion in what we might call the *Becoming Syndrome*. And today this is quite common. The underlying fear people have here is usually the inability to demonstrate their effectiveness as fully as they'd like to others and to themselves. The Pomodoro is a method for comparison, if not with others then at the least with themselves, and every tick and tock seems to reveal their lack of ability. Under pressure from time that passes, they look for shortcuts, but this isn't the way to go faster; shortcuts lead to defects and interruptions which feed into their fear of time in a vicious circle. How can they come to hear the ticking as a calming sound? The idea, the solution might be just around the corner with the next tick, but they'll miss it if they keep thinking how fast time is passing.

The first thing to learn with the Pomodoro Technique is that seeming fast isn't important, reaching the point of actually being fast is. You do this by learning to measure yourself, observe how you work, and develop the value of continuity. This is why the first objective to achieve with the Pomodoro Technique is simply to mark down the Pomodoros you've done.

If it takes four Pomodoros to draft a simple two-page review, it's not important that you expected to finish in two Pomodoros, or that you want to show everyone that you can finish in two Pomodoros. What's important is to find out how to go from four to two.

The initial challenge is knowing how to analyze how you work on the basis of test measurements collected every 30 minutes and not having expectations as to the result. Simply work, track, observe, and change in order to improve, if need be. Once this point is understood, the ticking starts to have a different sound. You need to concentrate to be fast.

The next step is to estimate and – why not? – even challenge yourself to succeed in completing a given activity within the estimated time. This is one of the rules of the game for the Pomodoro Technique; but never take shortcuts! The Xs marking completed Pomodoros are frustrating when they get closer and closer to the last estimated Pomodoro box. But you have to be brave and keep on working, staying calm and concentrated, to be successful. Stimulating the value of continuity leads to productivity and creativity. Every tick of the Pomodoro, if you hear it, is an invitation to stay focused, alert, and to continue.

Note At first, even getting through a single Pomodoro a day without interruptions is an excellent result, because it allows you to observe your process. The next day your effort will be focused on completing at least one Pomodoro with no interruptions, possibly two or more. With the Pomodoro Technique, the number of Pomodoros you finish doesn't matter so much as the pathway to consistently achieving more Pomodoros. This same incremental approach should be used when you take up the Pomodoro Technique again after you haven't used it for some time (for example, when you get back from a vacation). In this case, it takes patience and a bit of training to consistently reach 10-12 Pomodoros a day.

3.8 Constant Internal Interruptions

When you perceive internal interruptions as things that can't be postponed, it becomes difficult to complete even a single Pomodoro in a whole day. In these cases, we suggest you set the Pomodoro for 25 minutes and force yourself, Pomodoro after Pomodoro, to increase (and more importantly never reduce) the time you work non-stop. The final objective is to get to the 25-minute mark having worked continuously, with no interruptions. "In this Pomodoro I've managed to work for 10 minutes without interruptions, in the next one I'm going to work no less than 10 minutes, maybe even just one minute more." Results come Pomodoro after Pomodoro.

3.9 The Next Pomodoro Will Go Better

The feeling of having the time to do things and not using it well is often incapacitating. Your mind starts wandering from the past to the future: "If I had done that research on Internet yesterday, and last week I'd sent that email...How will I deliver the report by next week?" This provokes feelings of guilt and creates anxiety-filled situations.

The Pomodoro Technique allows you to keep your focus on the current Pomodoro, or once that's done, on the next Pomodoro. Your attention is trained on the here and now, emphasizing the search for a concrete way to stimulate the value of continuity and carry out activities in the most reasonable order.

When you feel lost, a Pomodoro can be dedicated to exploration in order to set your priorities straight and lay out a new plan. If your ideas are clear but something's missing – maybe determination, maybe a bit of courage – wind up the Pomodoro and start working on it, without waiting for time.

People who have the habit of procrastinating say that they benefit from the fact that the Pomodoro enables them to concentrate and achieve little things (activities that take 5-7 Pomodoros worth of effort, at the most), without having to worry about *every* thing. One Pomodoro at a time, one activity at a time, one objective at a time. For personality types with a strong tendency to procrastinate, it's important to realize that the initial objective is to finish one Pomodoro: 25 minutes of work on a given activity, without interruptions.

3.10 A Mechanical Pomodoro or Pomodoro Software

What kind of Pomodoro is most effective: a mechanical timer or a Soft-Pomodoro for the computer? Speaking from experience, the most effective Pomodoro is always the kitchen timer. In any case, to guarantee the highest possible effectiveness, the Pomodoro has to meet a number of requirements:

- You have to be able to actually wind it up. The act of winding up the Pomodoro is a declaration of your determination to start working on the activity at hand.
- It has to clearly show how much time is left, and it should make a ticking sound as time passes. This is a way we can practice feeling time and staying focused.
- It should make an audible, easily identified sound to signal that time's up.

What's more, to mark the end of a Pomodoro or to eliminate a finished activity from the To Do Today Sheet, Pomodoro practitioners should use explicit gestures. For this reason it's better if these aren't automated.

3.11 Improving Estimates

One of the more tangible results that can be attained with the Pomodoro Technique involves improving the ability to estimate. This develops along two pathways:

- Improvement of quantitative estimates by reducing the error between estimated Pomodoros and actual Pomodoros. In other words, while planning the day's tasks, the effort needed to complete a given activity can be accurately predicted. Self-observation and 30-minute measurements are the basis for more exact estimates. Experience shows that a positive sign of improvement in estimation is when the number of cases of underestimation is equal to the number of cases of overestimation. A strategy oriented toward systematic overestimation or underestimation does not lead to quantitative improvement. Learning to estimate is essential in order to be effective.
- Improvement of qualitative estimates by reducing the number of activities that weren't included in the planning phase. In other words, while planning the day's tasks, the number and type of activity that actually has to be done can be pinpointed (weak version), or better still the specific set of activities that serve to achieve the given objective with the least possible effort can be identified (strong version). Overall underestimation happens when we don't correctly identify the activities that have to be done, or we don't realize that the activities we have identified aren't the most effective. With the Pomodoro Technique, unplanned activities are tracked when they emerge. Observing and understanding the nature of these activities allows Pomodoro users to hone their forecasting and organizing skills.

Why does the Pomodoro Technique improve both aspects of estimation? One of the common causes of quantitative and qualitative improvement is that the activities we measure are continually divided up according to the rule: If It Takes More Than 5-7 Pomodoros, Break It Down. Smaller activities are more understandable and easier to estimate, so the margin of error shrinks. Smaller activities (but not too small) enable us to recognize simpler solutions. In fact, the aim of breaking down activities should never be simply to divide them up as far as possible. Instead, the point is to identify incremental paths which have the lowest possible complexity.

3.12 Motivation and the Pomodoro

With the Pomodoro Technique, three factors contribute to boosting personal motivation:

- Completing several activities a day that aren't too simple or too complex (Rule: If it Takes More than 5-7 Pomodoros, Break It Down.), which serve to reach your objective (13).
- Directly influencing personal improvement on a day to day basis.
- Being aware of how you work/how you're working thanks to continual observation and measurement.

3.13 And If Everything Goes Completely Wrong?

What should you do if you get caught up in a rush, or if you have a case of nerves or a panic attack? If you start feeling the anxiety of *becoming* and the deadline is getting closer by the second? What should you do in case of total paralysis? That can happen. It's only human. The Pomodoro Technique is extremely useful in these circumstances.

First, take a look at the situation. Try to understand what went wrong during the last Pomodoro. If necessary, reorganize activities; be open to new things to include and possible innovative strategies for pinpointing essential tasks. Focus on the next Pomodoro. Keep on working. Concentration and consciousness lead to speed, one Pomodoro at a time.

If you're especially tired, you need to organize shorter sets (for example three Pomodoros) and take longer breaks between sets. The more tired you are, or the more behind or panic-stricken you feel, the more important it is to repeat and review rather than to forge ahead at all costs. The key objective is never to recover lost time, but instead to be focused on taking the next step on your chosen path, which you often - consciously - change.

3.14 The Pomodoro Has a Limit

The main disadvantage of the Pomodoro Technique is that to reach your goals effectively, you need to accept being helped by a little mechanical object. Discontinuing the use of the Pomodoro Technique actually diminishes most of the positive effects described above. Though you still retain the ability to break down activities incrementally, and you might keep on taking short breaks, the discipline ensured by the Pomodoro seems to be the key to maintaining a high level of effectiveness.

3.15 When Not To Use the Pomodoro

The Pomodoro Technique shouldn't be used for activities you do in your free time. In fact, applying the Pomodoro would make these activities scheduled and goal-oriented. That's no longer free time. If you decide to read a book simply for leisure, you shouldn't use the Pomodoro Technique; doing so would be taking those Pomodoros away from unscheduled free time.