Ultralearning Summary

By Scott H. Young

What are some of the barriers preventing you from learning that new language, or a new skill that you've always wanted to acquire? For most of us, it's a question of time.

Ultralearning is an exhaustive guide on how to learn quickly and deeply. Just as an ultramarathon is a more intense version of a marathon, ultralearning is a more intense version of learning.

Ultralearning lays out the fundamentals of helping us to learn quickly, and retain new skills and concepts. We're shown how we can learn complex skills effectively, particularly over short periods of time. Furthermore, it teaches us how to create self-directed learning projects to stay relevant in our field, advance our career, and master any skill we desire with nine core learning principles.

Author Scott Young is a *Wall Street Journal* bestselling author, podcast host, computer programmer, and avid reader. His passion for self-mastery and career development led him to champion a thirst for learning to lead better more enriched lives. Young has spent years studying ultralearners, and in so doing, he's learned strategies and developed easy-to-apply principles designed to optimize learning for everyone.

In times of tumultuous economic and technological changes, Young believes that staying ahead depends on continual self-education. If we want to stand out and shed mediocrity, we need to commit to lifelong learning. However, this has difficulties because we can't always learn

new skills through old methods. Our old routines and ways of problem-solving often aren't sufficient to master difficult skills in a short space of time. Young offers an alternate approach by providing powerful strategies to enable us to break out of our mental ruts. We're shown how to push through, retain more, and achieve more by introducing new learning methodologies. So if you want to learn a new talent, stay relevant, reinvent yourself, and adapt to whatever the workplace throws your way, then it might be time to embrace ultralearning.

This Briefer summary explores the benefits of ultra-learning, the nine core principles of ultra-learning, and how to create an ultra-learning project.

Understanding Ultralearning

What if we could get an Ivy League level education without attending a top-tier college? What if we could learn that language we've been putting off learning? And, what if we could finally cross those skills we've always wanted to have, but haven't had the time to learn, off of our bucket lists?

The truth is that it's possible to do these things, as a whole group of people can attest to. There is an entire culture of people who value self-education and excellence, and they're known as ultralearners.

So what is ultralearning? Well, it's an intensive and rigorous strategy where we commit to a goal, and decide to undergo concentrated and focused learning. Once we make the decision to learn a skill, we assign a timeframe, and then move into deep focused work and compress the learning process.

As an example, our author and his friend traveled to Spain, with one caveat – they were to speak no English for three months. No exceptions. Initially, it was a struggle, but after three months, Young could have a conversation in Spanish. Over the year, the two friends traveled to three more countries and applied the same language rule. They could also have conversations in Portuguese, Mandarin, and Korean by the end of the year. This is an example of ultralearning in action, and applies the process of being self-directed and intensive.

If we look at how we traditionally learn languages through formal classroom learning, we can see how different the approach is. Classroom teaching is often prescriptive and doesn't encourage much agency. On the other hand, the process of ultralearning means we take control and build a path to knowledge that benefits us in real-world situations.

There are nine principles or strategies of ultralearning.

Principle One: Meta-learning – Have a Road Map

Every journey begins with a map of how to get there. And meta-learning is the way we scaffold our learning journey and get a big-picture understanding. Many of us might be tempted just to barrel in and begin the learning process, but having a plan helps us navigate our path.

We begin by asking why we want to learn something, then determine what we will count as success, and finally, we strategize how to achieve the goal. We often forego planning because we see it as a time-waster; however, planning or meta-learning should make up 10% of the process.

Why we want to learn can be seen in terms of enjoyment or for progression. Intrinsic learning is based on enjoyment, and this is motivated by acquiring knowledge for pleasure, and we aren't attached to the necessity that the skill has on our careers. Instrumental learning, on the other hand, is when we learn to further our careers, and acquiring the skill has a tangible result such as a promotion or a new job.

Once we have assessed why we want to learn something, we need to set our focus on making the learning a lot more specific. It's all very well saying, 'I want to learn French,' but this is often too vague and daunting. If we look at how Scott Young approached learning new languages, he set his sights on having a fifteen-minute conversation. So break down your goal or project into concepts, facts, and procedures to help you. Concepts are the ideas we need to understand, facts are things we need to memorize, and procedures are things we learn through practice. Knowing what we need to learn gives clarity and a sense of direction.

Next comes how. How will we go about the learning process? Benchmarking can help with this. Benchmarking is a way to identify common learning methods as a way to begin a project. The idea is to create lists and research how to make a start and find a benchmark for your project. Then you go through your benchmarks and emphasize or exclude specific resources depending on relevancy. Benchmarking can be further optimized by talking to experts.

In short, meta-learning creates a map, and forces us to focus on the right things.

Principle Two: Focus

We can't learn effectively if we don't engage in deep focus. And, when it comes to ultra concentration, there are three things that prevent us from engaging deeply. Procrastination, distraction, and poor optimization are the three areas we need to be paying attention to.

As we know from Cal Newport's *Deep Work*, focus is one of the most powerful tools we have. Heightened focus allows us to cut down our working time because distractions are costly. The good news is that focus and concentration are skills that we can build.

Do you battle to sit down and get to work? If this sounds familiar, why not instate a "warm-up ritual." Perhaps it's making a cup of coffee, going to the toilet, and then turning your phone off. Whatever the ritual, it'll get you into working mode.

Once you've sat down, set a timer. To begin, start with the three-minute rule. Set the timer for three minutes and agree to work throughout. This may sound like a short amount of time, but it generates momentum. There's also the Pomodoro technique where you set a timer for twenty minutes, have a break for five minutes, and then restart the twenty-minute clock.

We should also optimize our focus so that we can sustain it. Both our inner and outer spaces should be considered. For example, find a work environment that is conducive to work. Our workspace needs to work for us, so think about decluttering and freeing the work area of any distractions. We also need to take the temperature of our emotions and mental arousal. Some types of work rely on alertness, while others can be performed when we're less alert.

Focus and concentration can be learned, but it takes a lot of effort. The brilliant thing is that once we've developed good habits around concentration, we have a way to optimize and free up more time.

Principle Three: Directness – Go into Action Mode

We're often told to "go directly to the source." This same principle applies to skills. We learn a skill more effectively when we practice it in the environment where we will eventually learn it. This goes against the idea of traditional classroom learning.

We need to focus on immersion and simulation to do this. We need to be proactive about learning and apply our new skills as soon as possible. Where possible, make learning in the real world the focus. Immersing ourselves in a context is a great way to think on our feet and to either sink or swim. This is really effective when it comes to learning languages. Where immersion isn't possible, we can also use simulation as a technique. This is where we replicate real-life situations. The idea is that we want to create a situation that's as close to reality as possible. For example, having a conversation with a friend in another language, or simulating a quiz show environment to learn more about the world.

Direct exposure is the quickest and most efficient way to take something theoretical and make it practical. So if you want to learn to cook, the best way is to get into the kitchen and start cooking; similarly, if you're going to learn to code, adopt project-based learning, or a "learn-by-doing" mentality.

Principle Four: Drill – Attack Weak Points

In order to improve anything, we need to be aware of our weaknesses. The drilling process is about honing in on weaknesses and concentrating on these. What we choose to isolate as weaknesses, impacts overall proficiency, which unblocks a lot of our learning.

If we look at any successful ultralearner, they all utilize drilling. Whether they're top-performing athletes, computer whizzes, musicians, or artists, they all perfect their craft by practicing areas where they're weakest.

Drills are the opposite of the above principle, directness. They help us to improve a small slice of a skill and remove all the real-world subtleties we can't simulate. The direct-drill process is a way of enhancing weak spots, not replacing your whole project. To overcome the lack of transfer, work directly on the problem, drill your weak points, then go back to directness, and cycle through as needed, keeping all that precious transfer.

So, how do we design our drills?

We can use time-slicing, where we repeatedly focus on a particular segment. For example, when learning an instrument, we might repeat specific scales or parts of a song we're not proficient at. It's about isolating certain steps in a process and repeating them until we have perfected them. There's also the copycat method, where we compare and contrast what we're doing in relation to other experts.

Principle Five: Retrieval – Test Knowledge

Knowledge is nothing if you don't have the ability to retrieve it. We need to be able to record and access information that's stored in the memory.

Recall is a direct way of learning where we test our knowledge retrieval by asking ourselves questions and then answering them. Recall is focused on the short-term, and it's important because we need to remember whatever we learn. And the way to learn and remember isn't as easy as passively reading and rereading the text.

In fact, a 2011 study from Purdue University showed that most students adopt the review process over recall. However, when it comes to effectiveness, memory is far superior to reviewing when it comes to long-term knowledge retention.

So, why do we opt for a less effective learning method? Well, it all comes down to psychology. The "judgment of learning" is the process we adopt when we are engaged in learning. How often do you read over something and think to yourself, 'I've got that,' only to forget the information later? We often think that we know something because we have the perception that we have adequately grasped the concept. And as we know, perception isn't everything.

Interestingly, struggle is a crucial part of the learning process. If something is more challenging to learn, it'll be likely that we'll remember it in the long term. This is known as "desirable difficulty."

The good news is that we can practice recall by implementing effective

learning techniques. Flashcards are a great way to self-test, and they're beneficial for remembering facts. There's also the method where you write down everything you remember from a text. After reading, write down everything you can remember in as much detail as you can manage. Finally, try to write questions instead of notes. For example, when learning about World War II, ask 'What year did World War II end?' instead of 'World War II ended in 1945.'

Now that we've mastered some retrieval strategies, it's time to get on friendly terms with feedback.

Principle Six: Feedback – Learn from Criticism

The difference between learners and ultralearners is that ultralearners seek out intense feedback.

'Don't dodge the punches,' says Young, 'Put ego aside and look for the feedback that gets straight to the point on what we are doing wrong and how we can improve.' But beware, not all feedback is equal.

It all comes down to constructive feedback. The least valuable feedback is the one that appeals to the ego. For example, applause after a performance. The most useful is corrective feedback. This tells us exactly what we're doing incorrectly and how to fix it. If we want to improve, we need to learn to distinguish between the different types of feedback.

There are three types of feedback – outcome feedback, information feedback, and corrective feedback. Outcome feedback is basic, and it's based on whether or not we've reached our desired outcome. A round of applause confirms that we've done something well enough, but we can't

determine whether we've done better or worse than our previous performance. Information feedback is more constructive because it gives us an idea that we could be making errors. While we may not be given advice on how to fix it, we are signaled with a problem. For example, when people walk out of a performance. The best type of feedback is corrective. Not only are we signaled that something is wrong, but we're also given ways to fix the issues. We often receive this type of feedback when we hand in a paper and get a grade and comment on it.

As we know from Seth Godin's *The Practice*, we need to be able to elicit feedback, and ask for corrective feedback so that we can improve.

Principle Seven: Retention – Learn to Remember

Retention is the ability to retrieve information in the long term.

An extreme example of the power of retention is the ultralearner Nigel Richards. Nigel Richards won the 2016 World French Scrabble Championships. The catch is, he couldn't speak French. How did he manage to do this? It all came down to memory. There are 386,000 French words that are approved for Scrabble, and Richards learned each one of them. For those of us who struggle to recall a basic grocery list, let alone over three hundred thousand words in a foreign language, don't feel alone. Young reminds us that forgetting is the brain's default.

Ebbinghaus's forgetting curve is the idea that our memory decreasesover time. Unless we interact with what we've learned, we're likely toforget it. This is why many of us don't remember much of what welearned in the eighth grade. To retain information, we need to beconsciously engaging with it.

So, how do we get things to stick, and make them stick?

Firstly we can employ the strategy of spacing. This is a way of memorizing content, while also using it regularly in closely-spaced stages. For those who prefer cramming knowledge at the last minute, this will take some getting used to. Basically, the idea is to spread out learning and practice. When you devise a learning program, make sure you space out your sessions. Appropriately spaced, consistent spacing allows enough time to elapse, that retrieval of information becomes a challenge but not so much that we can't access it. Ideally, make time for memorization a few days per week.

If you're embarking on a practical task, then the best way of remembering it, is to actually do it. Over time you'll find that your body moves into autopilot. This method of retention is called overlearning, and we observe it with driving, where driving a car becomes second nature once we do it enough.

We can also try remembering things by creating mental pictures or employing mnemonics. The key is that we do everything that we can to ensure that we remember what we learn.

Principle Eight: Intuition – Develop Deep

Understanding

What makes ultralearners "experts" is their intuitive, detailed understanding of the ideas and principles of their field.

The Physicist Richard Feynman was known for his uncanny intuition. Feynman could see complex problems and find a solution. The technical term for this ability is intuitive expertise, and it can be challenging for people to pin down. However, Feynman's brilliance can be attributed to his deep understanding and knowledge of physics. This expertise meant he could intuit things that others might not be able to.

For many of us, we dreaded asking something "stupid" in class. However, to become an intuitive expert starts with understanding. Feynman would ask his students a host of so-called "stupid questions," that they'd find increasingly frustrating. The idea behind this was that we need to build our understanding of fundamental concepts, and we can only become intuitive experts when we understand the basic fundamentals.

There are three ways to build intuitive understanding. We need to struggle, aim to prove, and finally prioritize concrete examples.

Many of us look for shortcuts to learning. This is the wrong approach. We should be taking the path of most resistance where we develop an understanding of what we're trying to learn. Then we need to aim toprove something. This means knowing how something works and beingable to explain it in detail. We often believe that we grasp something, butthe reality is that we only have a shallow understanding. Finally, look for concrete examples. This is because the brain understands things more tangibly when there's an example to help explain them.

In short, the best learners don't just apply skills blindly; they understand how they work.

Principle Nine: Experimentation – Go Outside Comfort Zones

Proficiency isn't just about mastery. Originality is another marker of an ultralearner.

However, we can't be creative and original without experimentation. There are three strategies to help us move beyond mastery, and on the path of originality.

Firstly we can copy and then recreate. This is the method we employ when we cook. We reproduce a recipe, and then over time, we build confidence and have the skills and creativity to move beyond a recipe book. We can also experiment by introducing constraints. For example, we may limit ourselves by cooking vegetarian food for a month. Working within limits makes us shed habits and focuses our attention on trying something new. Finally, we can combine skill sets. Why not merge things

you're good at in new and creative ways?

Ultralearning often involves taking exploratory risks to determine new or better ways to meet our goals.

In Conclusion

Here's a quick self-test. Can you recall the nine principles?

Being an ultralearner isn't easy; it's hard work. However, Scott Young gives us the why and the how-to, in order to help us jumpstart our DIY learning adventure and keep it on track. And, if you don't know what your ultralearning project is yet, why not start by reading this book, and apply these principles to learn how to be an ultralearner?

You're in good company when James Clear and Barbara Oakley recommend your book. Ultralearning shares some overlapping information with *Atomic Habits* and *Learning How to Learn*, but stands on its own with valuable self-study strategies taught in the "Nine Universal Principles of Ultralearning."

So, are you ready to level up your learning and become an ultralearner?