

Summary of "Problem Solving 101" by Ken Watanabe

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A guide so simple and snappy, it was originally marketed for kids, Problem Solving 101 is your onestop guide to strategizing creative solutions.

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Introduction

Have you ever been faced with a problem and thought, "It shouldn't take this long to come up with a solution?" Whether it happens at work, in your personal life, or while doing a crossword puzzle, we've all been there. But fortunately, boosting your problem-solving ability is easier than you might think! Through the course of this summary, we're going to look at some life hacks that will help you say goodbye to that frustrating feeling you get when you know there's an answer out there and you just can't figure out. In the next few chapters, you'll learn how to break the problem-solving process into just four easy steps, while also learning some handy tips like:

- The super simple first step to solving any problem, no matter how big
- Why you need a "yes/no tree"
- How to achieve even your biggest dreams

Break Your Problem Down to its Core

You know that moment where you feel like your problem is so overwhelming, you just can't see a way out? Whether that problem consists of an English grammar exercise we can't figure out or the tension of being torn between two friendships, we're not always well equipped to solve the problems that come our way and the resulting confusion can be stressful to say the least. But that's why the four steps to problem solving exist! Because by following these simple methods, you'll be able to attack any problem. And it starts with breaking your problem down to its core. To do that, you'll need to get a better understanding of what your problem is really about.

To get a better picture of what that would look like in practice, let's imagine that you're really struggling with poor grades in math. As you reflect on how badly you're doing, it might seem that the first natural recourse is to cancel other activities-- like playing for your school's soccer team-- so you can devote more time to studying math. But robbing yourself of the activities you love might not be the answer! Instead, you can start by asking yourself which categories are actually giving you the most trouble. For example, are you really struggling with geometry, but you're okay at algebra and fractions? If a closer analysis reveals that it's only geometry which is bringing down your grades, then you already have your answer! Instead of canceling your involvement with the soccer team, restructure your study sessions so that you're concentrating on the area you struggle with the most.

But before you start studying, you should take one extra step and break your study process down even more. You can start by learning exactly what aspect of geometry most confuses you. For example, are you struggling to understand the Pythagorean theorem or do you find it really hard to measure the area of a trapezoid? This additional analysis will help you pinpoint your weak spot and, as a result, you'll be able to solve your problem more effectively and efficiently. So, now that you've identified your problem's core, it's time to move on to the next step: actually solving it.

What's Ultimately Causing Your Problem?

Once you've discovered the core of your problem, you can start to understand what makes it a problem. In other words, why is this something you're struggling with and what's causing it? This is the second step in our four-step problem-solving method and you can get started by listing all of the possible causes you can come up with. For example, let's say there's a children's band called Apples and Oranges. They hold monthly concerts at the local elementary school, but-- for reasons they can't quite figure out-no one ever attends. So, to solve their problem, the band members can begin listing all the possible reasons why. For instance, maybe it's a publicity problem; perhaps they haven't advertised well enough and no one knows about the concerts. Or maybe it's a matter of differences in taste; it could be that their target market doesn't really like pop music.

Now, this is a great start, but it doesn't really give them any definitive conclusions. So, to find some solid answers, the band members can use a tool called a "yes/no tree" to help them test their hypotheses. A "yes/no tree" is helpful because it enables you to find some possible answers by asking simple yes or no questions. In the case of Apples and Oranges, they might begin by asking, "Do people know about or concerts-- yes or no?" If they have reason to determine that the answer is no, then they've identified one major issue: a publicity problem. But if the answer is yes, their tree begins unfolding into new branches and they have some more yes/no questions to answer.

Those questions might look something like, "If people knew about the concert, did those people actually attend?" If not, the band members could ask why and hypothesize that perhaps this is because those people simply aren't fans of their music. And if they find that that answer is yes, then they've discovered the cause of their problem, even if it's a little sad. But if they determine that the group of people who knew about the concert really are fans, then they have new questions to answer like, "Why did more people attend the first concert than the second one?" As you can see, the

"yes/no tree" is useful for investigating your problem all the way down to its roots and you can use it to answer as many new questions as you can think of.

Brainstorming and Analysis

So, now that you've completed the first two steps-- breaking down your problem and determining why it's a problem-- you're ready to move on to our third step: performing a careful analysis that will help you brainstorm the best solution. You can start by asking yourself what information you need to adequately analyze the situation. And if you want to think about what that would look like in practice, we can return to the Apples and Oranges example. In their quest to analyze the problem of low attendance at their concerts, the band started by conducting surveys and interviews with a small sample group of students at their school. They then used the information they had gathered to determine that they needed to up their promotion game and incentivize attendees.

Once you've collected and analyzed the information, you can then develop possible solutions. In Apples and Oranges' case, that meant that they started advertising in the student newspaper and via email. They also considered options like paying for air time so they could play on the radio and playing in classrooms. They organized their potential solutions by listing them in a table which they broke down into two columns: one titled "Does This Increase Awareness?" and "Does This Entice People to Come?" They then arranged their potential solutions under these columns according to how well they fulfilled the goal of the heading. This can be a great way to start when you need to prioritize a wide variety of options and determine how well they fit into your plan of action.

Apples and Oranges determined that they wanted to prioritize the solutions which were both impactful and easy to implement and they used this system to weed out the ideas that didn't meet both categories. For example, their idea about performing in classrooms sounded great on one hand because they knew it would have a big impact. But they also knew it would require a lot of effort, time, and energy to repeatedly set up and dismantle the equipment in a very short period of time. But since a significant percentage of the school's population had indicated that they listened to the school radio, the band decided that having the radio station announce their concerts and play some previews of their music would be the most effective solution because it would both be simple to implement and have a big impact. So, in the end, they decided that making radio announcements part of their concrete action plan was the best choice.

Set Small Goals to Gauge Big Dreams

So, now that we've looked at the steps to problem solving and some examples of how they can be used in everyday life, let's take a look at some other scenarios where we can apply these problem-solving skills before diving into our fourth and final step. We'll start by looking at some examples involving our dreams because that's something everybody can relate to. After all, whether it's our childhood ambition to become the world's greatest figure skater or astronaut or our more realistic ambition to be accepted into a good college, we've all had dreams at one time or another. But unfortunately, they often get shot down, whether that's because we decide they're unrealistic or because others convince us we're not good enough to make that dream a reality. Sadly, in those cases, our dreams stay dreams forever because we never take the next step and act on them. But it doesn't have to be that way forever!

Instead, you can learn how to successfully hunt down a big dream by breaking it down into smaller goals. It's also important to start by making sure the goals are obvious, attainable, and set one at a time. For example, let's imagine the hypothetical scenario of a guy named Eric whose dream is to become a director of big-budget animated films like Frozen or Toy Story 4. Unfortunately, however, he has absolutely no skills when it comes to computer animation and that's probably because, for starters, he doesn't even own a computer.

Eric could look at the facts of his situation and determine that, because of them, he'll never reach his dream. But that would be a mistake! Because instead, he can break that enormous, seemingly impossible goal down into a smaller first goal: getting a computer. And since he specifically wants an Apple computer which costs \$600 (and he'd like to get it in the next six months without taking out a loan to pay for it), his goal now has some highly specific parameters that he can work with. This makes it much easier for him to realistically reach! So, once you-- like Eric-- have defined your

own small, clear, and specific goal, you can work on figuring out how to reach that goal.

One great way to start is by assessing the size of the gap between your current situation and where you want to be. In Eric's case, that meant taking a look at his finances to calculate his current savings and his earning potential in relation to his goal of a \$600 computer. So, after doing the math, he concluded that in six months, he would only have \$352 and this meant that the gap between his current situation and his goal was \$248. And in the next chapter, we'll learn how Eric can close that gap and you can too!

Turn Your Possible Solutions Into a Realistic Hypothesis

If you notice a hole in your favorite pair of jeans, your first instinct is probably going to be to sew it up, right? Well, just as you can use a needle and thread to bridge that gap in the fabric, you can use a list of possible solutions to bring you closer to achieving your dreams. So, as we discussed in the Apples and Oranges example, you can start by making a list of potential options and then choosing one which will serve as the hypothesis for your ultimate solution. In Eric's case, those ideas might include things like saving money, asking his boss for a raise, or hoping to win the lottery. But only some of those are realistic. So, once he has a few ideas to work with, he can make a logic tree, very similar to the "yes/no tree" our band members from Apples & Oranges employed.

For starters, his tree might have two branches: one for ideas about limiting his spending and a second that concentrates on raising his income. He can extend those two preliminary branches to develop new, more specific branches. So, under the "reducing his spending" branch, he can brainstorm new branches that outline specific, practical action steps for exactly how he will save money. For example, he might cut back on weekly purchases like video games or takeout. Once his tree is complete, he can trim the branches that are neither achievable or impactful (like hoping to win the lottery) so that he's only left with ideas that are actually feasible. He will then use this assortment of ideas to form his hypothesis: that he can reach his goal of buying the \$600 computer in six months by getting a job that pays more, selling some of his video games and DVDs, and cutting back on purchases. With his hypothesis confidently in place, Eric can then put it to the test by moving on to step four: creating an action plan.

Turn Your Hypothesis Into an Action Plan

By this point, you've identified the core of your problem, figured out why it's causing you to struggle, and created a hypothesis to solve it. So, now you're ready to move on to the next stage: taking action. But in order to do so successfully, you'll first need to analyze your hypothesis to work out exactly how to implement it. You can start by collecting relevant information. For example, in Eric's case, as he seeks to make more money by selling some of his things, he might begin by learning the retail prices of each of his games and DVDs to determine how much he could sell them for. He can also calculate his weekly spending by going over his bank statement and drawing conclusions like the fact that, last week, he spent \$50 on a video game, \$10 on a comic book, and \$5 on candy. From there, he could measure his purchases against his priorities to determine if cutting back on those purchases is worth it to him. He can then analyze the benefits of taking on a second job against the earning potential of selling his video games to see which would be more profitable and feasible. And after he's analyzed all that, he's ready for the fourth step: actually executing his plan.

And by following all of the steps outlined above, you can do the same! Just remember two things: that a plan is worth nothing if you don't execute it (so execute it well!) and that you should always be prepared to make adjustments along the way. For example, if Eric tried his plan and discovered that he couldn't sell his DVDs, he would have to adjust his plan accordingly and see if he could find an alternative source of income, like walking his neighbor's dog. It might not be what he had in mind, but his new knowledge of problem-solving can remind him that even if a setback does occur, he can simply modify his plan and keep trying until he achieves what he set out to do. And the same is true for you!

Final Summary

Everyone faces problems. Whether it's a simple math equation that stumps us or the struggle of finding a solution for a major life decision, problems large and small will follow us throughout every stage of life. And because of that, it's easy to get overwhelmed and feel that the answers to our problems will always lie just outside our reach. But nothing could be further from the truth! In fact, by simply applying a four-step, problem-busting method, we can quickly and easily solve every problem we're confronted with.

All you have to do is employ a little bit of concentrated analysis to get to the root of the problem, figure out why it's causing you trouble, and brainstorm a solution for solving it by using a "yes/no" or logic tree. These tools will help you ask the right questions and work through your options until you've narrowed down a realistic hypothesis which can form your ultimate solution. From there, you can put your action plan to the test with the understanding that, even if setbacks do arise, they're just meaningless hiccups and you can apply your new problem-solving skills to figure out anything.



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