

We have been losing for thousands of years Time for change?

For thousands of years gambling has been a human fascination and has played a major role in the history of nations. Around the year 1,000 A.D., King Olaf of Norway and King Olaf of Sweden are said to have come together to decide on the ownership of the district of Hising, a relatively isolated area claimed by both countries. Because the dispute could not be resolved diplomatically, the two kings agreed to roll a pair of dice. On their first rolls, both kings got double six; on their second rolls, the Swedish king came up with two sixes and the Norwegian king rolled six on the first die. The second, however, is said to have cracked and shown seven. Norway received the territory, and the two kings reportedly departed on good terms. Back then there were no computer simulations no advantage strategy and no resources to learn to take advantage of gambling situations, aside from cheats. Today we may not rely on gambling to see who will own what nation but it is a major source of income. In November of 2008 alone the Borgata in Atlantic City New Jersey made a profit of 29.2 million dollars. This is the off season in the time of an economic depression!¹

Over thousands of years we have come a long way. There are many more games to play and many more rules to be followed. Along with new games, rules and technology we have developed ways to take advantage of the casino environment. Through card counting, dice setting, shuffle tracking, advantage video poker, hole carding, computer simulations and a whole array of methods to generate a petite % of advantage for the common player, which we will call +EV (expected value), people have been able to gamble for a living and live comfortably. Realistically most individuals who pick up this book and decide to read everything else available to them will not be able to survive off of gambling funds. The road to success is not an easy one. Although basic methods can be learned quite quickly it requires hundreds of hours of practice and hundreds of hours of play to properly evaluate personal results. The methods you will soon learn are not the quick way to success or quick riches like many sites and you tube videos produce, which will be explained in detail later. The strategies and methods here will actually give you a mathematical and scientific advantage, no matter how small. Over time the small advantage will accumulate and will win you money when executed accurately.

If you think you are up to the task of becoming a true advantage player continue reading this book and all others you can find. There is always more to learn. In the back of this book you will find a section that compiles many reputable and worth wile texts to help you along your journey.

¹ If you would like to see profits and losses from each Atlantic City casino and game specifically all can be viewed at www.njccc.gov

Voodoo

Systems that claim to win but will ultimately lose in the end.

The opposite of advantage

Voodoo systems have many different origins they may rely on progression systems, streak systems, hot & cold tables or dealers, card clumping, trend analysis, "overdue" systems, etc. these systems may win a modest amount of money a majority of the time but when you lose you lose much more than you could have won. You must be aware that these type of systems DO NOT in any way over come the house edge² (HE) and will ultimately lose more money than if you were to flat bet³. "No betting system can convert a subfair game into a profitable enterprise... "-- *Probability and Measure* (page 94, second edition) by Patrick Billingsley Although they can be fun I would suggest against it except for a scenario such as this.

You fell on hard times your family was in need, you have no credit and no job. Using your superior judgment you decide to go to the mob boss down the street. Graciously he lends you \$5,000 hurray! But there's a catch you have one month to pay it back with 5% interest or he will break your knees and kill you... he also mentioned something about knowing your wife and kids... uh oh. So you pay off your debts and get a part time job. Slowly you start saving money but not quick enough you have \$2,500 and only 24 hours to pay back the \$5,250 there's no way to get more cash so you decide to go to the local casino. Upon entering you remembered a progression system. You remember you have around an 80% chance of doubling your money so you sit down at roulette and bet black for hours, doubling your bet after you lose and bringing it back to the minimum when you win. Your lucky today and make it out with your head and a safe family.

Although many will find the above example amusing and exaggerated it is really the only time a voodoo strategy is called for. This is because the house still has the advantage. Any type of system that uses only a betting strategy to win will ultimately fall trap of basic math. To prove this three experiments were conducted and validated by www.thewizardofodds.com⁴ to prove the HE could not be overcome by any strategy based solely on betting systems.. The experiment was conducted on a computer simulation of a single zero European roulette wheel HE=.052632. Player one did not use a betting strategy he simply flat bet the same amount every single time \$1. The second player used a progression strategy where he would bet \$1 after a win he would raise his bet by a single dollar a loss would drop the bet back to \$1 and restart the series. Player three started at \$1 as well used the double up strategy where after a losing bet of \$x he would bet \$2x (the Martingale). A winning bet would constitute the end of a series and the next bet would be \$1.

After 1,000,000,000 rounds the results were as follows.

² House edge- The % advantage the casino will make from your betting over a long period of time.

³ Flat bet- Simply to bet the same amount every single round.

⁴ www.Wizardofodds.com- The greatest and most informative gambling website of all time.

	Player One	Player Two	Player Three
Total Amount Wagered	1,000,000,000	\$1,899,943,349	\$5,744,751,450
Average Wager	\$1	\$1.90	\$5.74
Expected Loss	\$52,631,579	\$99,997,018	\$302,355,340
Total Loss	\$52,667,912	\$100,056,549	\$302,679,372
Ratio Of Loss to \$ Wagered (HE)	.052668	.052663	.052688

As you can see the ratio of loss to money wagered is always extraordinarily close to the normal house edge of $\sim .052632$ by $1/19$. By these results you can conclude that the more you wager the more you will lose over time no matter what. With a System that doubles up after a loss you are betting substantially more ($\sim 574\%$ or $\$4,744,751,450$) you are bound to lose at a devastating level.

Aside from the game being mathematically perfected to work against you the casino has set up rules to make it even harder for your system to work over the long run. The casino will set up a game minimum and maximum bet. In the above example our fictional character was using the most popular system called the Martingale strategy. The martingale is a progression strategy which can be found all over the internet being “proven to work,” “guaranteed,” “impossible to lose,” many people get sucked into this simple system and spend hard earned cash to learn it. The truth is it really is guaranteed, but not to win.... In this strategy you start off by betting the table minimum. When you win your bet stays the same but when you lose you double your bet to recoup your loss plus one bet size, which from now on will be referred to as one “unit.” After a win you bring your bet back down to the minimum. The following charts show what a single winning/losing sequence would look like with a \$5 unit and \$100 bankroll.

Winning Sequence

Losing Sequence

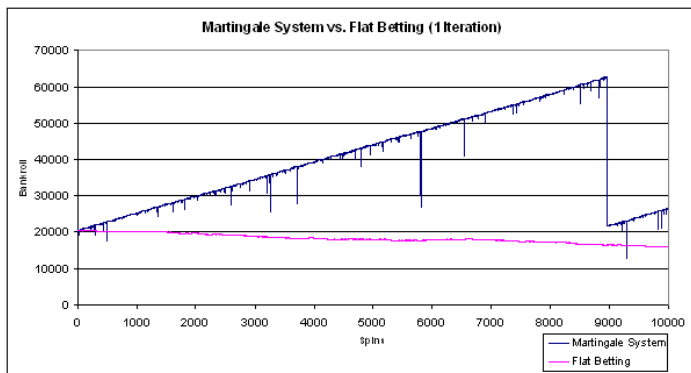
Bet	Win/loss	Bankroll		Bet	Win/Loss	Bankroll
5	win	105		5	Loss	95
5	loss	100		10	Loss	85
10	Loss	90		20	Loss	65
20	win	70		40	Loss	25
40	Win	110		25	Loss	Broke

Sure this system would be great if you had an infinite amount of money and no table max but unfortunately this is never so. In many cases the table maximum will be hit in

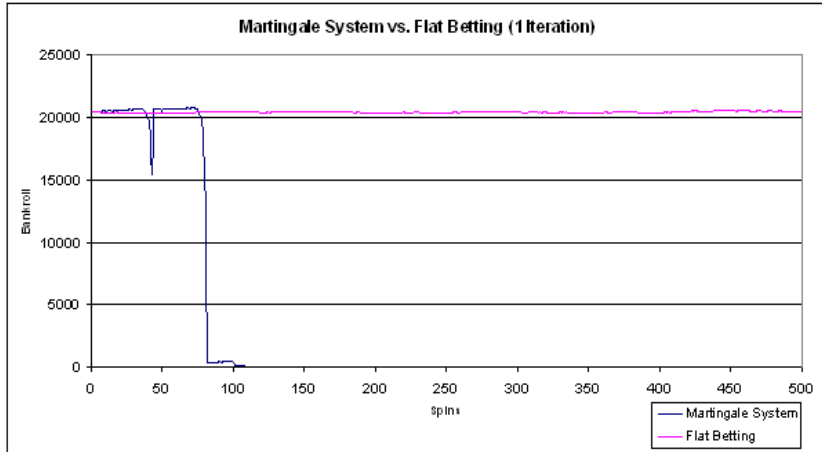
around 8-10 losses and will then become useless in getting back your losses. Many people think well eight in a row never happens or it is very rare. The sad truth is it is not rare at all and is actually very common. The house knows this and that is why you will never be banned from playing with a betting strategy.

Here are some graphs to allow you to visualize the effect of a progression betting system.

The graphs are the result of martingale betting (blue) and regular flat betting (pink) on a single color on a roulette wheel. The unit size was \$10 combined with a bankroll of \$24,480 allowing 12 consecutive losses.

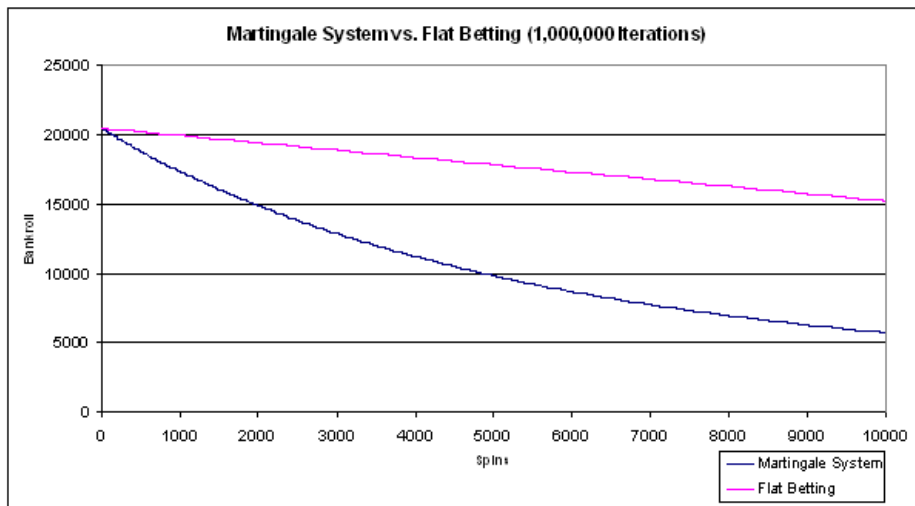


As you can see we were lucky! The graph peaked at around \$60,000! Unfortunately soon after we hit 12 consecutive losses and lost everything. So why not stop at \$60,000? There is no way to predict when or how often the losing streaks will hit. In the short run (or right now factor) it is impossible to tell what will be, it doesn't matter how long a previous win streak was, how hot a table is or how long its been since a win the cards, roulette wheel or dice do not have a memory. Every result is independent of previous its previous results. The biggest gambling myth is that an event that has not happened recently becomes overdue and more likely to occur. This is known as the "gambler's fallacy." Thousands of gamblers have devised betting systems that attempt to exploit the gambler's fallacy by betting the opposite way of recent outcomes. For example, waiting for ten reds in roulette and then betting on black. Casino games do not make up for previous results. It simply works out that over time the number of spins, flips or throws will eventually become so great the streaks become minuscule and unnoticeable. This is why all Voodoo systems will eventually fail.



Here is a second trial of the martingale system. Doesn't look much like the last one does it? These graphs of a single session of martingale will never be predictable. As you can see in less than 100 spins of the roulette wheel we lost everything! The peak was not even at +\$1000 quite useless if you ask me.

For all the non believers the following graph is 1,000,000 iterations of the martingale system .



It is easy to see flat betting is a sure loser but so is the martingale only at a quicker rate. I will let this graph do the talking for me. Draw your own conclusions⁵.

Graphs are taken from www.okthen.com I claim no rights to owning this material.

Unless someone can prove to you 100% through computer simulation that their strategy will work DO NOT FALL FOR IT. There are some crazy ones out there watch the first three cards if the dealer busts two times its is a blessing he will continue to do so. Sometimes they may truly believe they are right and try to back it up with figures pulled from thin air or statistics based on the gamblers fallacy. It is almost impossible to show

⁵ In case you drew the wrong conclusion... a martingale will ALWAYS lose over time!

a die hard voodoo bettor why they are wrong they will come to realize it when they lose. I can remember one specific example where I had to make up a strategy...

“I watch the deck for a while and count the number of red cards that come out. If in the first three hands the dealer has had >50% red cards (the color of the devil) I will not play with this individual again. If a dealer shows mostly black I will sit down and put out a max bet through the entire shoe. If you look at my strategy you can see it is based on a being greater than I and as long as I respect him he will do good onto me.”

and prove that I lost at the same rate that he did (the HE) to convince him the system could not work. You should now know how to pick out strategies based on the gamblers fallacy and disregard them. If someone you know is hooked try and help them before it is to late.

Table Games

The common casino will have a large variety of games and different rules available. Some have a minuscule HE some have a HE that can not be overcome. Here is a list of games and the average HE.

Game	House Edge
Blackjack	.75%
Baccarat	1.2%
Big 6 or 8	15.53%
Craps	1.58%
Caribbean Stud	1.46%
Let It Ride	2.4%
Pai Gow	1.65%
Pai Gow Poker	1.96%
Roulette	5.26%
Single 0 Roulette	2.59%
Casino War	2.87%
Spanish 21	8%
Keno	20-35%

These HE's can vary due to certain rules but this is a general guideline. As you can see blackjack has the smallest average HE and this is why we will aim a majority of our focus to this game. On the other hand the optimum strategy for keno is to run a dollar through the machine and hope to hit the jackpot and no more. After a little research it is easy to see why blackjack is the most beatable table game in the casino. There is a

enormous amount of information available in books, programs as well as online⁶. Lets start off with the most important and boring part of the game, basic strategy. Basic strategy is the best possible way to play every hand without any knowledge of the cards remaining. There are five basic moves basic a player can make;

Stand: Simply you do not want anymore cards. This is signified by a wave over the table palm facing down. In a single deck game you place your cards face down under your bet.

Hit: If the player wishes to take another card he may continue to do so until he either stands or busts. To signify you wish to hit, tap the table with your finger. In a single deck game, scrape your cards lightly against the felt.

Double: When you want to do so you double your bet and receive one card and one card only. You may only do so on your first two cards and sometimes after a split. To double in a single deck game place your cards face up next to your bet.

Split: A split is allowed when your first two cards are the same face value. When you choose to split you must double your wager. The cards will then be spread apart and each of your first cards will start a new hand. In single deck put your cards face up next to your bet.

Surrender: Casinos sometimes will offer the player the option to surrender on the first two cards. If the player does not like his prospects he may forfeit half the bet as well as his cards. If the dealer has a ten or ace showing, and the dealer peeks at his hole card for a blackjack before the first player's turn, then the option is called "late surrender." If the dealer does not check for blackjack, or does not take a hole card at all, then the option is called "early surrender." Early surrender is much better for the player, because of the protection against a dealer blackjack.

After all players have played their hands, from the dealer's left to right, the dealer will play his hand. The dealer has no free will but must always play by certain house rules. Usually the rule is that the dealer must hit until he reaches a score of 17 or more. Some casinos stipulate that if the dealer has a soft 17, an ace and any number of cards totaling 6, he must also hit. If the dealer busts, all players that did not bust automatically win.

For a little extra edge if you are sitting at a table and a player refuses to split or double when called for offer to buy the hand or pay for the split/double and split the winnings. As one of your most profitable moves it will only help out your chip stack.

This basic strategy charts taken from the wizards website is the proper way to play each game. Be aware whether your dealer hits on soft 17(H17) or stands on soft 17 (H17)⁷ as it will have an effect on your play.

On a side note a dealer will ask for insurance (average 7.246% HE) when showing an ace. A counter can get smart and take insurance when the deck is rich in 10s, but for a

⁶ As stated before in the back of the book many of the most respected resources can be found.

⁷ A soft hand is one that contains an ace and can equal one of two different numbers. Ex. An ace and six could be a 17 or a 7, we call this a soft hand. In H17 a dealer would hit this hand in a S17 game he would stand.

non counter never take insurance and never take even money on a blackjack even though there will always be someone at your table insisting it is the right play. Ignore him he's wrong and for the love of god do not try and convince him otherwise. He will not listen.

In a casino you are allowed to carry or purchase your own basic strategy cards for use during play. To use the basic strategy chart look up your hand along the left vertical edge and the dealer's up card along the top. In both cases an A stands for ace. From top to bottom are the hard totals, soft totals, and splittable hands. Rule variations can have an effect on some borderline situations. The most flexible rules are the number of decks, whether the dealer hits or stands on a soft 17, and whether doubling is allowed after splitting. The basic strategy charts do not include obvious hands such as 4-7 as they should always be hit. Another play that should be obvious but some players don't realize is that aces should ALWAYS be split as they are the most valuable card and near useless together. I remember one woman who did not want to split her aces even after discussion with the dealer. He proceeded to ask if she wanted a 2 or a 22... The sad part is she had to think about it... She finally decided on the two and went on to get two tens to bust her hand that would have been two 21's.

Basic strategy does not guarantee a win when played properly as a matter of fact you won't even win half the hands you are dealt! However it is true that in the long run you will be playing a near break even game. If your playing strictly for entertainment it does not get much better than that. So stick to the chart in all situations where you are not counting, whether you have that gut feeling or not.

There are some rules to look for and avoid while playing this wonderful game. The best possible rule change is blackjack pays 2 to 1 which subtracts 2.27% from the house edge. On the other hand you should always try and avoid 6 to 5 payouts which are sadly becoming more popular these days. What is the effect of this rule? A whopping 1.39% to the house edge, try and always play for at least 3 to 2 payout on your blackjack.

The chart below shows the effect on the player's return under various rules and after taking into consideration proper basic strategy adjustments. These changes are relative to the following rules: 8 decks, dealer stands on soft 17, player may double on any first two cards, player can double after splitting, player may split to 4 hands.

RULE CHANGE EFFECT ON PLAYER

We can all count but can you use it to make money?

Counting cards is the one thing in the casino that everyone knows about. With movies and books like, 21, bringing down the house everyone thinks it is easy and a sure road to riches. The sad truth is both these assumptions are wrong. You will not make a million dollars in a night without a loooottt of practice and a huge sum of money. Many people that make those assumptions realize how much effort is required and quit. But a few stick around to learn basics and attempt to play, these are the unlucky ones. Even fewer players read and practice to perfect their skills... even then many fail. A hard hitting fact is that only between 1-3% of people attempting to count will ever succeed. 1-3%?! That's a horrifically low percentage if you ask me. Don't let that scare you away, with determination and skill you can make it into that 1-3% Lets look at why so many people fail.

Insufficient bankroll- Most people do not realize how large a bankroll they need to succeed with a low risk of ruin (ROR).

*How much do you think you need to have about a 3% risk of ruin playing a \$5 game?*⁸

Insufficient knowledge- Many players will learn the basics of counting and jump right into play. As the basics of counting are easy it takes a very long time to become proficient and successful.

This was my first mistake. I read books a practiced and thought I had the game down pat. The funny thing is the casino is not like your kitchen table. The distractions will constantly make you lose count and the reality of gambling so much hits home. I was sent home knowing I had a lot more work to do. Luckily I sent myself home after a session of no limit holdem.

They cant handle the swings- The swings aka. Standard deviation and variance (luck), are unbelievable. This game is an emotional rollercoaster and you must lose all attachment to money. This is something extremely hard for most people to do as they work so hard for it. This is why we will think of money as units instead of dollars. Another thing to remember is that when played correctly YOU HAVE THE ADVANTAGE. Although your advantage is minuscule over time it adds up significantly. Remember we are in it for the long run not the short run. The more you play the more you make no matter how bad your luck has been.

Playing a bad game- as you will soon find out you must search for a game with beatable rules.⁹ You must also bet accordingly to the game you play. Many people do not bet large enough when they have the advantage and are playing a break even game...sometimes worse.

I had a friend who claimed he was a counter. We went to the local casino and I soon

⁸ About \$2,000! Seem a little much? Don't worry we will go over replenish able bankrolls and why you need so much. But don't let this scare you away for now.

⁹ CBJN (Current Blackjack News)- Run by www.qfit.com they send out volunteers monthly to scout out the casinos. Virtually every casino is in this article although some smaller ones may not be updated regularly.

found out he had the skills needed but not the betting structure. You will find in some games you will need to spread your bets from 1 unit to 13 (\$10-\$130) to have a money making game. This player was betting 1-2.5 (\$10-\$25) after confronting him I found out he could not handle the swings and was gambling with rent money! With such a strong attachment to his bankroll and pathetic bet spread his game was useless only to fall trap to the HE.

Back to first grade

The actual counting in itself is quite easy. Back in elementary school we learned the basics 1,2,3,4,5... and to begin counting that is really all you need to know. The count we will be using is called Hi-Lo, it is an extremely simple but powerful count. Many professional players and teams such as the famous MIT blackjack team resort use Hi-Lo due to its ease of play and simple management in team play. To use the count we assign a number value to each individual card.

Card	Value
2-6	+1
7-9	0
10-A	-1

As you can see there are an equal number of plus and minus cards this will result in what we call a balanced count. In a balanced count you begin at zero. As each card is displayed you will add whatever the value to your total. For example...

Card	2	7	6	Jack	10	Jack
Count	+1	+1	+2	+1	0	-1

... and so on through all 52 cards. At first It will be tough and will take quite a long time to go through the deck. You should set your brain to completely ignore those 6-9's there's no need do be thinking about adding or subtracting zero from the count. With some practice your brain will just pass right by. Keep doing so until you can consistently get 0 at the very end. Consistently being 100% correct. If you remove a card from the deck and place it face down on the table at the end of the deck you should be able to tell yourself what it is. A count of +1 means it is a 10-A likewise -1=2-6 and 0=6-9. To add another step to the process begin to work on count speed without speed costing you accuracy. I can count down a deck in 12 seconds but you do not judge a counter solely on his or her count speed. As a general guideline try and get your speed into at least the 25 second range for casino play.

Some helpful tips.

Instead of saying negative [insert number here] in your head get into the habit of saying “M” [insert number here.] It will really speed up your counting and wont be near as confusing.

When you become to fast to count down a deck by flipping cards onto a table simply turn the deck over and slide the cards from one hand into the other. This way you can virtually finish off a deck in no time.

Also start to learn to count in pairs and groups. This is going to be a real help down the road. Many times pairs and groups will cancel each other out for example we could have a table like this.



You can see that the first players hand J,6 (-1,+1) cancels out to equal zero the next players hand (J,8) is M1 and the final players hand also cancels out keeping the count at M1. The dealers hand makes the final count negative or M2. After some time you will simply glance over a table, ignore all cancellation hands and immediately come up with a count. This method is much easier than repeating in your head; King, M1, Jack, M2, 2, M1, 6, 0, 8, 0, Jack, M1, 10, M2. You could imagine sitting at a full table trying to figure out the count of 13 cards while adding up your hand. In the meantime the dealer is doing his job dealing cards to other players. There you are sitting thinking your done only to find you now have to count six more cards. But wait! One player busted without you seeing and your count is now flawed. This isn't even a worst case example!

The running and true count

What you have just learned is called the running count (RC). The running count is the cumulative value of all cards played at any given time. Because our Hi-Lo system is balanced it also requires us convert this number to what is called the true count (TC) in order to make accurate variations to basic strategy play. Making the conversion is not as hard as you may think. To do so you simply have to divide your running count by the number of decks remaining. This brings us to a whole other skill needed to be a card counter. Deck estimation. You can not simply look into the shoe and make an accurate estimation of how many cards are left. This is not possible because the cards are angled and spread apart unequally. Do not worry this doesn't cause us much trouble. All you have to do is look over to the left side of the table or right side of the dealer and on into the discard tray. You will see the used cards stacked up neatly. You will then need to decide on how many decks are in there. You will take that number and subtract it by the number of decks used in your game, for our sake lets say our game uses 6 decks. So here we go:

- You have been keeping your running count and it time for a conversion... The count is +10
- We look over to the discard tray and see we have used up about 2.5 decks. Remember we are using 6 decks so $6 - 2.5 = 3.5$ decks remaining in play
- We take the number running count and divide it by the decks left in play... $+10 / 3.5 = \underline{2.85}$ this is our exact true count. Sometimes we do not have time or know exactly what the count is so I personally round to the nearest .5. So our count will be +3

This is what we must do on the spot at the table before every move we make. Do not ever forget your running count. Easier said than done it will take practice to be able to deal with distractions, think, and talk. To overcome this factor, while at home deal, count and play while the T.V. or radio is playing. If possible have someone deal multiple hands to you as well as talk and act as a dealer until you can perform socially while keeping everything straight.

So that's about it right? No way we still have a long way to go. Remember I told you it is not easy and requires a ton of practice. I would suggest not reading on until you can mater counting, conversions, deck estimation and some level of play with distractions. If you do decide to continue on things may be a bit tougher for you as there will be many more steps to come.

So you decided to go on congratulations! You have mastered basic counting. But don't get running off to that casino yet!

If you haven't mastered all your skills yet that's ok... I really don't care... I do admire you for wanting to read on. So soak up the knowledge and make sure you practice afterwards!

