



The Big Five

Quote of the Month: *If you have read 200 chess books and you are still not that good; then reading a random 201st is not likely the key to getting better!*

In previous Novice Nooks I have mentioned *The Big Five*. Here they are, from the archived [Novice Nook's Chess Lists](#):

The most important aspects to concentrate upon to start playing good chess ('The Big 5')

- **Safety** - *Chess safety = tactics*; especially important are *counting* and basic motifs.
- **Piece activity** – Use all your pieces all the time.
- **Thinking process** – What are all the things my opponent's move accomplishes? Real Chess, etc.
- **Time management** – Pace yourself to use almost all your time every game.
- **General guidelines/principles** – Learning them, and then learning how and when to apply them.
- *Bonus*: Make your chess learning fun.

After many years of full-time chess instruction, I am more convinced than ever that if weaker players would concentrate on just these five areas, they would improve quicker and have much less of a “ceiling” on their playing strength. Plus, most of the remaining chess information can be acquired much easier if it is studied later in the learning process, when it has The Big Five as a baseline to build upon.

Let's review each area of The Big Five to see why its inclusion is justified; estimate how long it should take to get competent; present some methods for improvement; and speculate as to how you know when you are sufficiently skilled:

Safety

What is it?

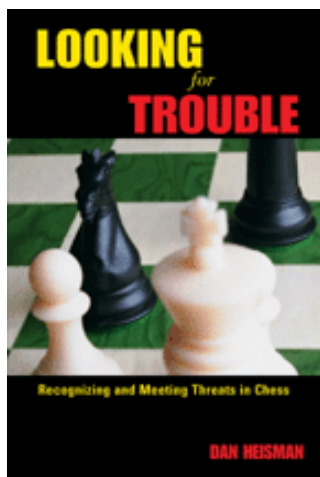
Basic Tactics. Everyone has heard of tactics, but what exactly is that? One definition I like is that *tactics is the “chess science” of piece safety*. It involves (forced) sequences that win material or checkmate. I define the five levels of tactics, in ascending order of average complexity, as:

- En Prise
- Counting

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- Single motifs
- Non-sacrificial combinations (combining motifs)
- Sacrificial combinations

So basic tactics not only includes counting (making sure no sequence of captures on any one square can win material); all single motifs (double attack, removal of the guard, pin, etc.); common and simple combinations; and also elementary checkmate sequences (e.g., how to mate with a king and queen vs. king, etc.).

Why is it on the list?

If you can't keep your pieces safe, then all else is lost, and if you can't win your opponent's pieces when they are not safe, it is *much* more difficult to win! In general, basic tactics – starting with safety and counting – should be your first area of study once you have mastered the rules.

How do you improve at it?

The first and most important step to becoming proficient at tactics is understanding safety and counting, followed by repetitious study of very simple problems, those involving counting and single motifs (pins, double attacks, removal of the guard, etc.). Acquisition of this skill usually requires the kind of drills suggested by Michael de la Maza in his two-part [400 Points in 400 Days](#) article for Chess Café. The big contention I have with Michael's method is that he suggests repetition of tactics of all levels, while I feel that concentrating on just the easiest motifs is sufficient. My reason is that many, if not most, difficult combinations contain permutations of basic motifs.

Therefore learning basic tactical motifs "cold" in order to do harder problems better is similar to learning multiplication of one-digit numbers as the basis for all multiplication and even higher mathematics. The following is a terrific – and fairly common – example of how a more difficult tactical problem consists of basic components:

Black to Move and Win a Pawn



1...Bxf3 Temporarily giving up the bishop pair, but achieving *removal of the guard* on the e5-square! **2.Qxf3** If 2...dxc6 **Bxc6** **2...Ne5** Fork and *removal of the guard* on d5! **3.Qe2 Nxc4** Getting rid of the bishop pair, as a bonus to removing the bishop's guard on d5. **4.Qxc4 Bxc3** *Removal of the guard* again! **5.bxc3** or **5.Qxc3 Nxd5** winning the pawn, but not **5...Qxd5** **6.Qxc7**, which is not as good. **5...Nxd5** **6.Rd1** A *pin* that had to be foreseen by Black

as harmless to make the combination work! **6...c6 7.Qb1** To threaten both 8.c4 and 8.Qxb7 **7...Qc7** sidestepping both, and Black is up a pawn. Believe it or not, a strong player would at least see the first five moves of this fairly quickly and then search around to see if White could do something dangerous on move six. Phenomenal skill? Perhaps, but since pretty much all strong players can do those five moves rather easily, the reason is likelier to be common pattern recognition. Basic deductive logic plays a strong part as well, e.g. “That pawn is defended by the knight, but I can capture the knight so perhaps I can win the pawn by capturing the knight first...” etc.

Although the analogy of tactics to multiplication is not perfect (some difficult tactical problems are *not* just combinations of single motif problems), in general it is necessary to be able to solve the common, easy patterns quickly and accurately to have a decent chance to identify and solve difficult problems that are encountered during play.

Amount of time required:
A lot of time is required.

How do you know when you are sufficiently skilled?

If you have a set of easy non-checkmate problems, with at least 400 (preferably more) positions, containing all types of tactical motifs and you can do 85%+ correctly within 10-15 seconds per position, then you are probably fairly capable at that level. A real test is to be able to score that same result with a set of random problems that you have never seen before, and the best indication is if you can recognize those same tactics in game situations! Checkmate problems are much rarer in actual play, so while studying them is definitely helpful, they are not nearly *as* helpful as “play and win” problems. Therefore basic checkmate problems can – and should – be included in the study set, but they should be a rather small minority.

Piece Activity

What is it?

Piece activity means that the piece not only has raw mobility (number of squares to which it can legally move), but also plausible, safe moves. For example, a piece may have ten moves, but if the opponent’s pieces of lesser value guard all ten squares, then it may have no practical activity at all; the more activity, the more powerful the piece. We can generalize that a more active army is both more powerful, relative to the total value of your pieces, and more flexible. Easy proof: why is a queen worth more than a rook? Because it can also move diagonally, thus potentially giving it more activity. (Note: In this Big Five item, the definition of piece does not include pawns).

Why is it on the list?

Activity is the yin of tactics yang. Namely, *if you lose a piece it cannot do anything, so the reason you keep your pieces on the board is so they can do something. Conversely, a piece that is always doing nothing is almost worthless, so it is almost as if you don’t have it.* So therefore **you must keep your pieces both safe and active, else neither is worth anything.** If you don’t understand this truism, then you are missing one of the great points of chess. As Garry Kasparov has been known to say, “Chess is all about piece

activity.”

How do you improve at it?

It is ironic, but you *can* improve at keeping your pieces active quicker than almost any item on this list. Yet, my experience shows that weaker players have more difficulty with this than with many of the other Big Five items! Following many of the piece activity guidelines requires discipline more than knowledge, and there is the rub! It is easy to acquire knowledge – for example to do 500 basic tactical problems over and over until you can do them instantly in your sleep – but for some it is almost impossible to acquire discipline. The temptation to make a premature attack or “save your rooks for the endgame” or follow any number of bad habits that leave your pieces inactive, and others awkward at best, is too great for many. And sometimes these bad habits are rewarded and psychologically reinforced with an undeserved victory by weak opponents. So while, of course, it is helpful to know where each piece is most powerful in a given pawn structure (see Andrew Soltis’ excellent but advanced *Pawn Structure Chess*), it is much more important to play a disciplined game where you follow such guidelines as:

- “In the opening, move every piece once before you move any piece twice, unless there is a tactic,”
- “In the endgame the most important idea is often to activate your king,”
- “A premature attack is doomed to failure,”
- “If you don’t know what to do, identify your worst piece and make it better.”

When I first started playing chess and was instructed to develop each piece efficiently in the opening, I initially thought, “So what? If I get a tempo behind, I can always catch up later. After all, he can’t play an entire attack with only one extra piece out for one move.” But I was dead wrong. Once I started playing stronger players and I fell behind in development, they used their superior force to make threats – *taking the initiative* – and I was usually so busy addressing those threats that I could *never* catch up in development and lost in the end! So I became much more cognizant and efficient in getting each piece into play. This shows the advantage of taking on stronger players – if you can learn from your mistakes, then having those mistakes pointed out to you as often as possible is most helpful!

Amount of time required:

Theoretically, very little time is required, but in practice it is difficult for weaker players to implement because the “lure” of premature attacks is very tempting.

How do you know when you are sufficiently skilled?

To answer this question we must differentiate between being sufficiently skilled at piece activity and being so good you could not possibly improve any more. The latter is an almost impossible goal. It is also difficult to identify when you are sufficiently skilled enough to graduate from the Big Five, but it probably occurs when you can play game after game and notice that you are aware that *every* piece needs to be active *and* you consistently attempt to

orchestrate that activity throughout the game. Note that in some situations you can be aware that your activity is not sufficient, but not be able to do anything about it – that happens when you are in a *bind*.

Thinking Process

What is it?

Thinking process is the method you use when you are given a chess position and are asked to generate a move. In a sense, thinking process consists of not only the events and their sequence, but can also be expanded to include its two most important *contents*: **analysis** – the process of generating moves for your analysis tree, and **evaluation** – who stands better, by how much and why, in any given position with a particular player to move.

Why is it on the list?

If you use the expanded definition given above, then creating the foundations for a good thinking process is truly a must for inclusion in the Big Five. Chess is a mental sport and from that perspective, nothing in chess can be more important than the method by which your brain processes positions and formulates moves. A bad thought process can leave you with a very distinct ceiling on your playing strength, and you may forever wonder why that ceiling exists. Sure, good players all think somewhat differently, but they all use certain essential features that allowed them to become good and without which they would not have become so skilled. A player with a good thought process can often beat a player with much superior knowledge and experience, but an inferior thought process.

How do you improve at it?

It is difficult to improve your thought process without some external help. This can come in the form of:

- Listening to good players analyze a position,
- Reading books and articles about thought process (several new books have come out in the past few years),
- Reading annotated master games where thought process is discussed,
- Taking lessons from a good chess instructor who works on thought process.

Amount of time required

Theoretically, little time is required once you know the minimum criteria needed to practice. However, if you begin with bad habits and have to think about these meta-criteria while you are thinking about your move, then it takes a bit of practice until you can perform the better thought process subconsciously, which should be your goal.

How do you know when you are sufficiently skilled?

One key indicator that shows positive things about your thought process is if you are rarely surprised by a good move during a slow game. By which I mean a move you “did not even seriously consider when it was your turn to move.” The importance of not being surprised is illustrated by the following tale: One of my students got to the expert level and I asked him when was the last time he was surprised by his opponent’s move in a slow game. He smiled

and wisely asked if I meant by a *good* opponent! I said yes, and he replied that it had been *six months* since he had encountered a move he had not considered during a slow game against a good opponent! His answer may be extreme, but you get the idea: if you are constantly surprised by your opponent's good moves, you probably need to re-examine part of your thought process. Similarly, if you play too slow or too fast for the time limit, obviously something is wrong with your thinking process since neither of those is optimum.

Time Management

What is it?

Time management is the ability to check how much time you are using on your clock and pace yourself so that you play at the "right" speed and use almost all your time by the end of the game. There are exceptions where the game ends unexpectedly, or stays unreasonably complicated throughout, but in general you don't want to play too fast (and finish with unused time) or too slow (and get into time trouble and have to play too fast).

Why is it on the list?

Because time management is important, underrated, and (should be) easy to control once you become aware of it. The disaster of playing too fast – or having to play too fast later in a game because you played too slow earlier – usually results in *much* bigger errors than a reasonable pacing. My students have estimated that they could only win about 5% of their games against their clone if they had to give 60 minutes to five minutes odds. That is about 500 rating points! And even if you have 15 minutes left to your opponent's 5 (no time delay) with quite a bit of play remaining, that is probably worth about 200 rating points; i.e., you can win about 75% of your games against an otherwise equal opponent.

How do you improve at it?

First, you have to be aware of the importance of your time usage. Secondly, before each event you should calculate the average time you need to take per move for the time control. For example, suppose the time control is Game/90 with a five second time delay. Then conservatively assume there will be forty moves in the game. So you have an average of 90/40, or 2 minutes and fifteen seconds for each move – 2 minutes and twenty seconds with the time delay (but your clock will only go down by 2 minutes and fifteen seconds, on the average). Of course you don't take exactly this much time for each move – that is silly as well as almost impossible; make non-critical decisions quickly and critical ones slowly. Third, you should monitor your time management periodically – do this while your opponent is thinking. Ask yourself if you are going too slow or too fast and adjust accordingly. Additionally, if the game looks like it will take much less or much more than 40 moves, you also have to adjust for that change in the number of moves required. Honing your time management skill requires practice and also self-discipline. However, if you are consistent in doing so, it should not take you long to make good time management part of your game routine.

Amount of time required

Theoretically, little time is required, but to hone your skill requires experience

and practice at different time control rates. Since that kind of experience requires several different events, usually this takes some time.

How do you know when you are sufficiently skilled?

If you go to tournaments and are consistently finishing your game near the end of the (final) time control, or at least when most of the good players are completing their games, that is an excellent sign. Also, consistently finishing your games with a small, but not microscopic, amount of time provides the same good indication. Yes, occasionally there will be games that end abruptly with resignation (or an early draw) where you have plenty of time left, but these should not be games where you get into trouble, play fast, blunder and resign. If you get into trouble, slow down, or you may end up with lots of time left on the clock that you could have used to try to get out of trouble. They don't pay you for extra time left on your clock at the end of a game, so use it!

Understanding and Prioritizing General Principles

What is it?

Much of each player's chess knowledge is encapsulated in bits of data that help guide your move choice or other chess-related decisions. This data is referred to as *general principles*, *guidelines*, or *rules of thumb*. What differentiates a principle from a rule is the strictness of its application. If you apply a rule it should always work, with the caveat that if there are exceptions, they can be delineated. Thus a rule differs from a guideline, because more judgment is required when applying the guideline. A guideline which is generally useful can be nonsensical, non-applicable, or even harmful in specific positions. An example of a general guideline is "keep your pieces safe." An example of an opening guideline is to "move every piece once before you move any piece twice, unless there is a tactic." An example of a middlegame guideline is "if the d- and e-pawns for both sides are completely locked together, imagine a line going between these two pawns and the direction it points indicates which side of the board you should attack." An example of an endgame guideline is to "activate your king." Because guidelines are so variable, learning how to apply and prioritize them becomes at least as important as learning them in the first place (see the archived Novice Nook [The Six Common Chess States](#) for more information).

Why is it on the list?

Many players rely heavily on these guidelines to help them understand what to do in any given position. For example, while it is virtually impossible to memorize every opening line ever investigated and published (even on the lines you play!), it is quite a bit easier to learn most opening guidelines and apply them to positions where it looks like they should be applied. Since in almost every game you are "out of book" at some point, the answer is not to learn more opening lines, but to learn to consistently and wisely apply opening principles.

How do you improve at it?

When you read books or evaluate games with stronger players, the author (or stronger player) often quotes helpful guidelines for certain positions, or explains why a given guideline might not apply or is superseded by a more important guideline. Any well annotated master game usually includes several

guidelines, so reading lots of annotated master games is extremely helpful. The necessity of knowing this kind of useful information has become so obvious that grandmaster Lev Alburt and Al Lawrence published [*Chess Rules of Thumb*](#) with over 300 guidelines. Many other books (such as my [*Looking for Trouble*](#)) put general principles in italics, bold, or in a box to bring these important ideas to your attention. Finally, my website has a “Guidelines” page that has well over 100 guidelines.

Amount of time required

A moderate amount of time is required to learn the guidelines; and a great deal of time is required to learn how to prioritize them based on the situation.

How do you know when you are sufficiently skilled?

In a sense, you are never as good at understanding and prioritizing guidelines as you can be. But don’t be discouraged; there are ways to tell if you are adequate. For example, if you are comfortable in the opening each time you are out of your “book,” then you probably have a sufficient understanding of general opening principles. Similarly, if in the endgame you are comfortable knowing how your goals and plans differ from those in the opening and the middlegame, then again you have probably achieved a passable level of understanding.

Make Your Chess Learning Fun

This is not really an item for improvement, but it falls in the same general category of things that help you get off on the right track. If you already find chess learning fun, nothing is left to be done. But if you don’t, see if you can find ways to do so: keep track of your puzzle-solving statistics (the percentage of correct answers and amount of time taken) and make it a game to see if you can do better the next time. Or see how quickly you can play over *The Most Instructive Games of Chess Ever Played* while still retaining some basic idea of what those games are trying to teach. Have a friend read the same book, and then have a second friend quiz both of you to see who absorbed more of the important points (no, *not* “What is the third word on page 87?”). Put the tabia of the chess opening you learned into *Bookup*, put on training mode, and see if you can remember the line, etc.

What’s Not on the Big Five List

There are many important ideas that are not on the Big Five list. They may not be included because they are not areas of sufficient correlation to lower rated players’ improvement, or not important enough, or just areas that can wait until you master much of the Big Five. These include memorization of opening lines, psychology, development of physical traits (stamina, memory), how to play particular pawn structures, advanced tactical patterns, particular endgames (except for basic mates and king and one pawn) and many other chess-related concepts.

When I first started to play, I reached the 1900 level two years after playing in my first tournament. That is approximately the upper 10% of all tournament players, so obviously I was beating players who had much more experience and knowledge than me. I had also never played at a public club and Internet

play was 30 years in the future. In retrospect, I think it was because I was competent at the Big Five. My competence was certainly *not* because of my specific knowledge in openings and endgames. For example, *after I had been an expert for several years* I lost a simple, theoretically drawn, “Philidor” endgame; therefore, that kind of specialized knowledge is not necessary for becoming a good player! (Note: I now teach this endgame to all my more advanced students).

This “Big Five” experience was repeated by my son who, unlike me, never liked to study chess and only read one chess book in his entire life. (I made him do it as a punishment!). However, he achieved a peak rating of USCF 1800+ in the 11th grade, before falling back somewhat as he de-emphasized chess in preparation for college. Moral of the story: work at getting good at the Big Five and you will not only get the most “bang for your study buck,” but may also find that the other chess areas you had been studying may not be as helpful as you previously thought until you achieve Big Five competency.

I have found that being good at any one of the Big Five is necessary but not sufficient for improvement. For example, knowing all the basic tactics does not help if you don’t keep your pieces active. Similarly, being noticeably bad at just one is enough to nullify most of the others, e.g. if you play much too slowly, then you will get into time trouble and likely make big tactical mistakes, no matter how many tactical patterns you can recognize quickly and accurately. Your playing strength “chain” is only as good as your weakest Big Five “link.”

Finally, it is worth repeating that once you get to be a good player the list of important chess areas that need studying changes! Good luck in your improvement quest!

Dan welcomes readers’ questions; he is a full-time instructor on the ICC as Phillytutor.


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