400 Points in 400 Days

I did it and you can too

Extremely rapid chess improvement for the adult class player: A five-month program

Michael de la Maza

I began playing tournament chess in mid-July of 1999. My provisional rating placed me squarely in the Class D category because I played, well, like a Class D player. Here are two of my more notable gems:

White: Herman, F.
Black: de la Maza, M.
August, 1999 MCC Swiss U1700
1.e4 c6 2.d4 d5 3.Nc3 dxe4 4.Bc4 Nf6 5.f3 exf3 6.Nxf3 Bg4 7.Bxf7+ Kd7 8.Ne5+ 1-0

White: Oresick, R.
Black: de la Maza, M.
1999 BCC $12 Open
1.d4 d5 2.e3 Nf6 3.Bd3 Nc6 4.f4 Nb4 5.Be2 Bf5 6.Bd3 Nxd3+ 7.cxd3 e6 8.Nf3 Bg4 9.O-O Bb4 10.Qa4+ 1-0

Dissatisfied with my initial results, I began to search for ways to achieve rapid chess improvement. I looked at dozens of books and hundreds of book reviews. Unfortunately, the vast majority of these were either aimed at a much more knowledgeable reader or focused on specific areas, such as openings, which I found arcane and uninteresting.

Discussions with chess coaches were just as unhelpful. Many coaches felt that improving more than 100 rating points in one year was all but impossible for adult players. Others refused to provide me with suitable references. One chess coach who I worked with had me spend a dozen hours on the KBN v K ending in the first month of coaching, and had suggested that I annotate several hundred grandmaster games in my favorite openings when I decided to stop following his instruction.

As a result of these experiences, I decided to create my own study plan for achieving rapid chess improvement. So far this study plan has worked: I improved 400 rating points in my first year of OTB play and my play continues to improve.

Shortcomings of Standard Chess Instruction

Devising this study plan, which is based on studying tactics in a particular way, required me to understand why traditional methods of chess instruction were failing.

Insight #1: Chess knowledge is not the same as chess ability.

When I was researching chess coaches, one comment I heard again and again from students was: “I have been studying openings, endgames, middlegames, weak squares, knight outposts, etc. and feel that my understanding of the game has improved greatly.” I would always follow these statements with the question: “So, how much has your rating improved?” Time and again, students told me that their ratings had not improved in the three months, six months, or year since they had started their coaching.

Why did these students’ ratings fail to improve? Class players who spend their time on openings, middlegame strategy, and endgames are doing an excellent job of increasing their chess knowledge, but they are not increasing their chess ability.

For a class player to study openings, middlegame strategy, and endgames as a way of increasing chess ability (as opposed to chess knowledge) is the equivalent of fixing a car that doesn’t have an engine by polishing the exterior: the car looks better, but it still doesn’t go.

A Class-player’s chess ability is limited first and foremost by a lack of tactical ability. As GM Jonathan Levitt wrote, in a recent KasparovChess.com article, “At lower levels of play...tactical awareness (or a lack of it) usually decides the outcome of the game.”

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Or as GM Nigel Davies writes on his web site (www.checkerwise.co.uk), "In the Minor section of weekend congresses one can witness players trying to ape the openings of players like Kasparov. Other players will desperately try to get their 'surprise' in first through fear of their opponent's 'preparation'. I really find all this quite amazing not least because the games concerned are almost invariably decided much later on and often by rather unsophisticated means."

Consider the following thought experiment: Take two class C players and give one the positional knowledge of a grandmaster and the other the tactical ability of a grandmaster and then imagine that they play a game. Who will win? Clearly, the class C player with the GM's tactical ability will win. After the class C player with the GM's positional knowledge gets a += edge in the opening, he will drop a piece to a five move combination. In fact, give the class C player an expert's tactical ability, rather than a GM's, and he will still win.

You can perform a similar experiment with any chess-playing program: create two personalities, one without any positional knowledge (no opening book, no understanding of pawn structure, etc.) and with the maximum tactical knowledge and the other with the maximum positional knowledge but no tactical knowledge. When these two personalities play against each other, the tactical personality will win every game.

You can refine this experiment further by creating two personalities, one that can see three moves ahead but has no positional knowledge and the other that can see two moves ahead and has complete positional knowledge. The tactical personality, which can see three moves ahead, will win the vast majority of the games.

This is a key lesson: all of the positional knowledge in the world is worth less than the ability to see one move ahead. In other words, given the choice between being able to see five moves ahead in every position and having no positional knowledge and being able to see four moves ahead in every position and having a GM's positional knowledge, you should choose the former.

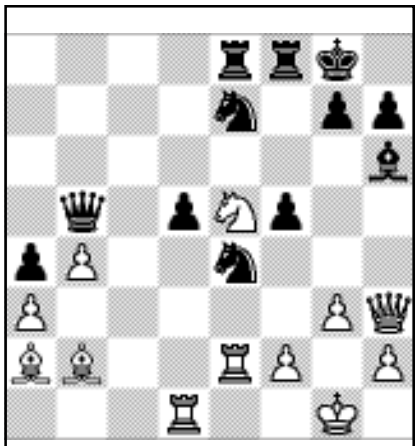
Photographer: Cortizas

IM Bill Paschall and kids analyze at the Fall Foliage.

Insight #2: GM instruction is sub-optimal at the class level.

"It's generally — but erroneously — assumed that the best teachers are the best players, and that the best players can easily communicate the secrets of the game. Actually, the best teachers are often just interested amateurs..."
— GM Andrew Soltis

Virtually all chess instruction stems, in one way or another, from material prepared by GM's. GM's, however, have two characteristics that make it difficult for them to communicate effectively with adult class players. First, almost all GMs were master-level players by the time they became adults. A corollary to this fact is that virtually no GM has experienced rapid chess development as an adult player. I believe that this is why many chess coaches think that it is all but impossible for an adult chess player to improve more than 100 rating points in a year. Since very few chess coaches have ever achieved such improvement, they find it difficult to imagine that anyone else can achieve such success. The fault with this analysis is, of course, that the chess coach is starting



White to Move.

from a very high level. The question that adult class players would like to have answered is how much can a 1300 player expect to improve in a year provided that he or she has a superior study plan?

Second, GM's are so far removed in playing strength from class players that their advice is often misguided. For the same reason that a university mathematics professor will probably not be able to teach addition as well as a first grade teacher, a GM will probably not be able to teach the basics of chess as effectively as a pedagogically inclined player who is much weaker.

These two facts have created an interesting situation: While some instructors, such as Bruce Pandolfini, are known for their work with young students and others, such as Dvoretsky, are known for their ability to help strong players become world-class players, there are no chess instructors who are known for their ability to help adult class players achieve rapid improvement.

Insight #3: Quick fixes work at the class level

Strong chess players like to talk about the many years of dedication and hard work that are required to become a master-level player. Unfortunately, they often confuse this hard and time-consuming path with the relatively small amount of work that most class players need to do to experience significant improvement in their playing ability.

For example, in Yermolinsky's *The Road to Chess Improvement*, a runner up for this year's British Chess Federation Book of the Year award, Yermo spends several pages denigrating simple set ups such as the Grand Prix Attack. He argues that a chess player must be willing to dedicate a substantial amount of time to studying a "real" opening. With all due respect to Yermolinsky, this advice is off the mark. A class D player can become a class B player in one year without knowing the Sicilian, the Gruenfeld, or the Ruy Lopez. I know because I did just that. As FM Pelts and GM Alburt write in *Comprehensive Chess Course (Vol. II)*: "We beg students who are addicted to opening manuals to remember that most players who spend their time studying theory never reach A-level."

Unfortunately, the myth that deep theoretical knowledge is required in order to improve permeates the class player community. I once saw a class E player carrying around Keres' *The Art of the Middle Game* at a tournament and studying it between rounds. This player would have been better off setting up random positions on the board and looking for tactics.

Tactics: Get rid of the big squiggly lines first.

Once I understood that many of the beliefs surrounding chess study were incorrect, I wondered if there was a way to study chess that would lead to rapid chess improvement. Improving rapidly was important for my enjoyment of the game. As IM Ignacio Marin notes, "...if you don't improve fast enough the experience will be so painful that you probably will not want to play chess at all after a while."

An interesting exercise courtesy of Professor Fritz helped to clarify my thinking on what I should study first. I analyzed a game of mine that took place when I was a class C player. My opponent was also a class C player. The game went through the following phases: 1) The first eight moves were approximately equal. 2) On the ninth move my opponent blundered a knight for two pawns. 3) I maintained my knight for two-pawn advantage until the 27th move when my opponent blundered again giving me an additional pawn. 4) Then on the 29th move I blundered in fantastic fashion and gave my opponent the opportunity to mate. 5) Instead of seeing the mate, my opponent immediately blundered back, giving me an advantage of a full rook. 6) The game continued for another ten moves with both sides regularly making sub-optimal moves.

Fritz's evaluation graph, which shows which side is winning and by how much after every move has wild swings, indicating that both sides made critical tactical mistakes.

In contrast, a similar exercise done with a GM game, say Shirov-Polgar (Mexico, 2000), looks quite different. In this game, which Shirov won, Professor Fritz judges the position to be between +/= and =/+ for the first 31 moves of the game, a sharp contrast to the game between the two class C players which saw five major tactical blunders in the first 30

Benjamin – Gufeld, Kona 1998, **1.Rxe4! fxe4 2.Qe6+ Kh8 3.Qxh6!! Nf5** (3…gxf6 4.Nf7++ Kg8 5.Nxh6# is mate; relatively best is 3…Rf6 4.Qh5, when White has a winning advantage) **4.Ng6 Kg8 5.Rxd5! 1-0** From *The Ultimate Chess Puzzle Book*, by John Emms.

moves. From move 32 to 39 black maintains a -/+ advantage. The advantage switches back and forth until move 43 when black allows an advanced pawn and the game is over when black blunders on move 46.

I encourage you to perform this experiment yourself using games involving players of different strengths. You will notice a monatomic relationship between the number of big squiggly jumps in the evaluation function and the players' ratings: the higher the rating, the smaller and fewer the jumps.

Clearly, to become a good player you must reduce the number of material changes that put you at a disadvantage. This is far more important than memorizing a deep opening line that will lead to a +/= advantage or learning the BNK v K endgame.

This is the fundamental reason to begin by studying tactics: if the big squiggly lines are going against you, it does not matter how many little squiggly lines are in your favor. Here are some other reasons to focus on studying tactics: Tactical shots are easier to analyze.

Suppose that you are reading a book that discusses a position in which positional factors, not tactical ones, are the over-riding concern. If you have a question about a variation that is not covered in the book, what can you do? Not much, unless you have a chess coach who is willing to answer questions ad nauseum. In contrast, you can receive GM-level tactical analysis by using a computer and can fully understand every variation.

There is an amusing experiment that you can try in order to verify the difficulty of understanding positional evaluations. Pick any analyzed position in Jeremy Silman's *Reassess Your Chess*, the book that has become famous for teaching class players positional concepts, set up the position on your favorite computer program, and play the side that is winning according to Silman. After a few moves the computer will deviate from Silman's analysis. Feel free to check Silman's book or any other source for advice on what to do about the computer's "new idea." You will quickly learn that the computer has busted Silman's plan and a new plan is required. Now what do you do? If you are a GM you can create a new plan (provided that you didn't reject Silman's plan from the start), but if you are a class player there is little that you can easily do to learn about the new position.

Studying tactics gives you many things for free. For example, which is the better way to learn about the benefits of castling: (A) Learn a positional "rule" along the lines of "Castle early" or (B) Do ten tactical problems in which a king in the center of the board gets mated? Clearly (B) is superior. If you come across an opponent who fails to castle early and you know (A) you'll be able to say: "Jeepers. My opponent doesn't know how to play chess — he didn't castle early." If you learned about the benefits of castling by following option (B) you will know 10 concrete ways to punish the opponent. The same thing is true of many other positional concepts. What is the best way to learn about color complexes, knight outposts, gambit openings, rooks on the seventh rank, etc.? At the class level, the best and easiest way is to learn tactics.

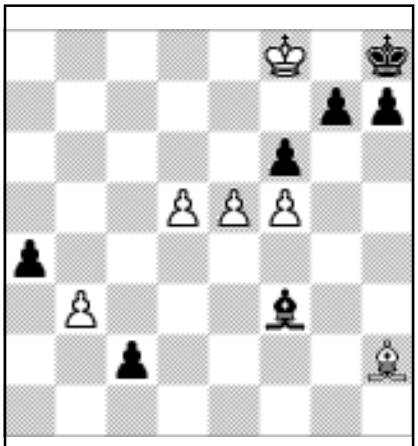
Positional understanding requires tactical understanding. Class players may find the right plan in the middlegame only to blunder a piece because they fail to see a tactical shot. Or they continue pursuing their plan despite the fact that they have an immediate opportunity to win by grabbing an opponent's piece. Positional understanding without tactical ability is worth little.

The Study Plan

Once I understood the importance of studying tactics, I created a three-step plan for improving my tactical ability. If you are an adult class player and you follow this plan, I believe that you will experience an improvement in your rating similar to the one I experienced.

The first step of the study plan involves exercises that pound very simple tactical notions into your brain. The second step, which I call Seven Circles, is to go through a set of about 1,000 tactical problems seven times over the course of 127 days. The third component is to learn how to integrate your newfound tactical ability into your OTB play.

All three components require dedication. You should study every day even if you are sick, are traveling, or are playing in a tournament.



White to Move

Step 1: Improve your Chess Vision with Micro-level Drills

The goal of step 1 is to greatly improve your Chess Vision: what you see in the first ten-second glance at the board. You will do this by repeating a set of micro-level exercises.

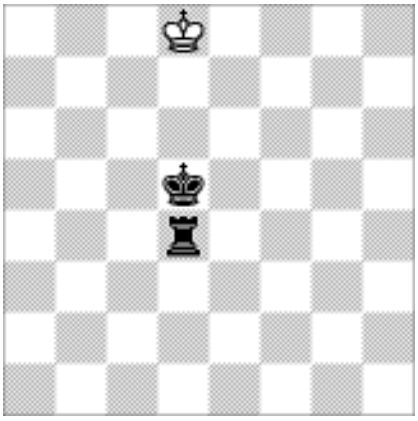
When athletes practice, they repeat short exercises over and over again. For example, basketball players stand at the free throw line and shoot free throw after free throw. Soccer players practice simple passing schemes repeatedly.

Standard chess study involves very few of these micro-level drills but here, in the first step of the plan, this is exactly what you will be doing. The first step lasts 28 days. During the first 14 days you will practice simple forks and skewers. During the next 14 days you will focus on the knight and how it moves.

To practice simple forks and skewers use an exercise that I call the Concentric Square. Begin by placing the black king on d5 and a black rook on d4. Now sequentially place the white queen on every square where it safely forks or skewers the black king and rook. Once you have determined that there are no such squares move the rook in a square around the king (squares e4, e5, e6, d6, c6, c5, and c4) and look for forks and skewers. When you find such a square, physically lift up the white queen and place it on the square. Involving your body in this process is critical because it helps to cement the connection between the position and the key square.

Bogoljubow, E: Study, 1915 [Deutsches Wochenschach] **1.Bf4** [1.exf6? gxf6 2.Bf4 h5] **1...g5** [1...fxe5 2.f6 g5 3.f7+-; 1...Bxd5 2.exf6 g5 3.fxg6 hxg6 4.bxa4+-; 1...h5 2.d6] **2.d6 Bc6 3.e6 gxf4 4.d7 c1Q 5.d8Q** +-. From *Grandmaster Efim Bogoljubow* CD-ROM, by Victor Charushin, Pickard & Son, Publishers.

Now move the rook one square further away from the king and repeat the process. The rook now moves through the squares c3, d3, e3, f3, f4, f5, f6, f7, e7, d7, c7, b7, b6, b5, b4, and b3. Continue moving the rook one more square away from the king until the rook reaches the edge of the board.



This diagram illustrates the concentric squares that the rook traces as it moves around the stationary king. The rook travels the following path: d4, e4, e5, e6, d6, c6, c5, c4, c3, d3, e3, f3, f4, f5, f6, f7, e7, d7, c7, b7, b6, b5, b4, b3, b2, c2, d2, e2, f2, g2, g3, g4, g5, g6, g7, g8, f8, e8, d8, c8, b8, a8, a7, a6, a5, a4, a3, a2, a1, b1, c1, d1, e1, f1, g1, h1, h2, h3, h4, h5, h6, h7, and h8.

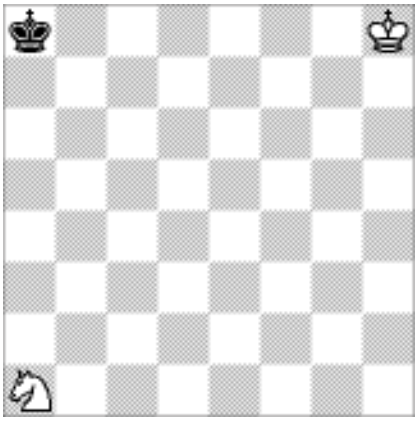
Ed. Note: I had to add a White King to insert the diagram.

Now replace the black rook on d4 with a black bishop, black knight, and black queen and repeat the Concentric Square exercise. Finally, pound the attacking patterns into your brain by repeating the Concentric Square exercise for each of the black pieces (black rook, black bishop, black knight, and black queen) every day for fourteen days.

By the end of these 14 days your ability to see forks and skewers in your first ten-second glance at the board will vastly improve. After the initial 14-day period, consider going through these exercises once or twice a week and before games to refresh your skills. You can add variety to these exercises by using a white rook, knight, or bishop instead of a white queen and changing the position of the black king to, say, g8 and c8, the two squares that the king moves to after castling.

As you are going through these exercises you will probably notice that the knight poses the most difficulty. The squares that the other pieces can move to just pop out while the squares that the knight moves to often have to be "calculated" by class players. This consumes time and energy that could be used on other aspects of the game. When I was a class D player I remember dreading having an opponent's knight posted on e5/e4/d5/d4 because I knew that I would overlook a fork at some point. Conversely, I knew that if I was able to post a knight on one of the four center squares I was very likely to win the game.

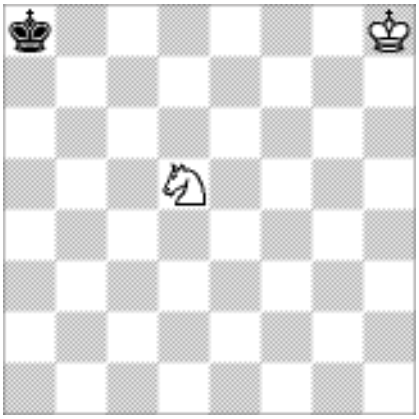
The next micro drill, which I call Knight Sight, is designed to make the squares that a knight can move to "pop out." Begin by placing a knight on a1 and physically hit the squares that it can move to (c2 and b3) with your finger (see next diagram). Then move the knight to a2 and repeat the process. Continue until you reach a8 and then move back to b1, going row by row until you reach h8. Repeat this Knight Sight exercise every day for one week.



Improve your Knight Sight by placing the knight on a1 and then physically hitting the squares that it can move to, c2 and b3, with your finger. Then move the knight to b1 and repeat the process.
Ed. Note: I added the King's to insert the diagram.

At the end of this week, test your Knight Sight by placing the knight on random squares on the board and see if the squares that it can move to jump out at you. If they do not, then repeat the process for another week and continue doing so until you no longer need to calculate the knight's moves.

Once your Knight Sight meets your standards, you are ready to move on to the next step. Place a knight on d5 and calculate the minimum number of moves that it takes to bring the knight to d4.



Improve your Knight Sight further by placing the knight on d5 and calculating the shortest path to d4. For added challenge, calculate all minimal paths.

You can prove that it takes exactly three moves: first you can show that it does not take one move because your Knight Sight makes the squares that the knight can move to in one move pop out, and d4 is not one of them. Second, you know that it cannot take two moves to move the knight to d4 because the knight alternates colors, and since d5 is a dark square, it cannot be on d4 which is a light square after two moves. Third, it does not require more than three moves to go from d5 to d4 because you can calculate at least one path (e.g., d5-c3-e2-d4) that takes exactly three moves.

Now go through the same process that we followed in the Concentric Squares micro drill. Starting each exercise with the knight on d5, move the knight to the squares e4, e5, e6, d6, c6, c5, and c4 in the minimal number of moves. For added challenge find all of the minimal paths, not just one. And, just as before, expand the concentric square as shown in Figure 1 and repeat the process. Continue expanding the square until the knight is at the edge of the board.

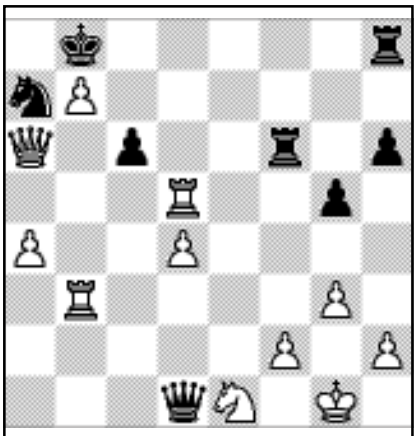
Repeat this process every day for a week. As a refresher repeat it before tournaments and on a monthly basis. You can vary the exercise by changing the knight's starting square. Instead of d5, try c3, f3, b1, and g1, all natural squares for the knight.

Some players may object that these micro drills are so trivial that they are unnecessary. The fact that they are trivial, however, does not mean that they are not useful. Remember that soccer players practice penalty kicks and basketball players practice slam-dunks even though these tasks are trivial. Professional athletes perform these micro drills over and over again so that they can perform at a high level in adverse situations.

Your ability to spot combinations and to calculate knight moves will have greatly improved.

Even very strong players make simple Chess Vision mistakes. For example, Joel Benjamin missed a mate in one against Boris Gulko at the 2000 US Championships. The purpose of these exercises is to automate the knowledge that you already have so that you unconsciously see combinations without having to exert any effort. So the time and energy that you save can then be spent on calculating complicated combinations.

You are now finished with step one of the five month course. Your ability to spot combinations and to calculate knight moves will have greatly improved and you are now ready to move to step 2, which we will explore in the next issue.



White to Move