## Chess Training

## The important areas of chess knowledge



## Chess strategy

The importance of your knowledge of chess strategy lies in the fact that it enables you to choose a suitable plan for the position.

## Chess tactics

Knowing many tactical themes and patterns will help you quickly identify the possible presence of tactics in a position.

## Chess Openings

In the opening (the first 13 moves or so) pieces and pawns are mobilized for attack and defense. The four primary opening goals are:

1. Control the Center
2. Develop all the pieces, especially the minor pieces
3. Safeguard the King
4. Hinder your opponent whenever possible

Knowing your openings will help you to successfully achieve the opening goals and be prepared and ready for the middlegame.

## Chess Endings

The goals in the endgame are:

1. To checkmate the opponent's King
2. To promote a pawn to help achieve goal 1.
while preventing your opponent from achieving the same goals.
Knowing a variety of chess ending themes and patterns will help you to press home the win in a superior position and give you a better chance to draw in an inferior position.

## Chess experience

The strength of your chess play depends largely on your decision making process. Your decision making process is refined and improved over time through gaining experience by:

1. playing chess
2. studying chess-related material

Experience is a valuable source of chess knowledge that draws from your memory of games previously played either by yourself or by other strong players. Analyzing grandmaster games critically allows you to tap into the experience of the great players... Analysing your own games allows you to determine any weaknesses in your play and allows you to take steps to correct them.

## The role of chess visualization

Your knowledge of chess plays a significant role determining how well you can play. However, your knowledge relies substantially on your ability to calculate. Improving your chess visualization skill can help to improve your calculation effectiveness.

## Chess strategy training

Chess strategy refers to the plan you devise for the position. How often in your chess games do you reach the point where you feel: "Now I am not sure what I should do next"? The plan you finally decide on, will reflect your understanding of the nature of the position. Thus the first step in deciding on your chess strategy is to evaluate the position to the best of your chess knowledge.

The image illustrates the most important aspects that should be considered in order to evaluate the intricacies of the position on which you will base your chess strategy:


## Chess strategy: King safety

An unsafe king is generally the greatest weakness a position can have.
Typical elements that weakens the king's safety:

1. Any weakness or absence in the pawn shield in front of the king.
2. Fewer defenders than opposing attackers in the area near the king.
3. Lack of centre control gives attacking pieces easier access towards the unsafe king.
4. A king that delayed castling for too long (unless the centre is blocked).

Tip: Since the safety of the king is so important, it is one of the main principles of chess strategy during the opening stage of the game. The other important principles of chess strategy during the opening are effective development of the pieces and your share of control in the centre.

## Chess strategy: Pawn structure quality

The quality of the pawn structure can usually be judged by the following factors:

1. How it supports and affects the mobility of the pieces,
2. how dynamic it is (how easily it can change),
3. the presence of weaknesses like some isolated pawns and
4. the squares which have been permanently weakened by pawn moves.

If possible, weaknesses in the pawn structure should be fixed before they become permanent.
Tip: Weaknesses in the pawn structure is only relevant if the opponent can attack them. Often you can have some form of compensation for a weakness in the pawn-structure - which might well outweigh the disadvantages thereof.

## Chess strategy: Piece quality

Piece quality refers to the quality of the role that a piece plays in the position as well as how well it co-ordinates with the other pieces. Some determinants of the quality of the role the piece plays, is:

1. Mobility - The amount of squares available for the piece to move to gives an indication of its mobility. The more squares it can go to, and the number of targets it strikes, the higher the quality of the piece.
2. Flexibility - How easily can it change its role? Pieces near the centre are usually more flexible than pieces on the flanks and therefore have a higher quality in this regard.
3. Stability - How easy is it for the opponent to exchange or remove a piece from its square? Pieces that can't be easily removed have a higher stability value.
4. Importance of the task - Ideally a piece would perform both an attacking as well as defending role simultaneously. In some cases a piece would perform a very important defensive task, freeing other pieces for more aggressive roles.

Piece quality refers to how well a piece is performing compared to its potential, but piece quantity refers to the number of pieces on the board. Having a material quantity advantage is the most important advantage you can achieve - if the opponent does not have sufficient compensation for the material deficit. While it is often hard to obtain a material advantage against stronger players, achieving superiority in the quality of your piece placements can give you something to work with.

## Chess strategy: Square control (Space)

Tip: Space advantage refers to one side controlling more squares of the board than the other side. Since this extra space will naturally increase the mobility and flexibility of your pieces their quality will increase. It follows that the space advantage is one of the most important chess strategic advantages you should play for.

## Chess strategy: Square control (Center)

The importance of the control of central squares lies predominantly in the fact that it enhances the quality of your pieces - enabling them to fulfill more diverse roles and increasing their mobility. This ultimately means that your position is more flexible when you control the centre and it will be easier to create or take advantage of weaknesses in the opponent's position.

The situation in the centre is often the greatest determinant of the chess strategy you should follow in a game. The typical strategies follow logically from your observation of the situation in the centre, for example:

1. Closed centre: When the centre is blocked and cannot open easily, you have more time to organize your pieces. The play will occur on the flanks of the board. Your chess strategy would then be to optimize the placement of your pieces and prepare to occupy any file that may open up. In blocked positions, control of an open file is often a useful advantage.
2. Open centre: An open centre demands that your chess strategy is to have very active pieces. In a situation where the centre is open but your pieces are placed passively, you will lose quickly. Minor weaknesses are often not so important in open positions, since a well conducted attack would decide the outcome of the game before the weakness can be exploited by the opponent. A position with an isolated centre pawn is one example where the player with the "weak" isolated pawn gains compensation in the form of open lines for his/her pieces. Many pawn sacrifices are also based on this same strategic principle.
3. Dynamic centre: This simply means the situation in the centre is not yet clarified. In this case, your chess strategy should firstly be to clarify the situation in the centre. Taking offensive actions on either of the flanks whilst the centre situation is not yet clarified is often a mistake. If you attack on one of the flanks before the centre situation is clarified, a well-timed counterattack in the centre could well prove your pieces to be offside and unable to sufficiently defend the weaknesses you created in your own position.
4. Mobile centre: A mobile center is where you have a pawn chain containing at least two united pawns and your opponent has a maximum of one pawn in the center. In this case, your chess strategy should be to advance your center pawns and create at least one passed pawn in the centre.
5. Fixed centre: In this case the pawn position in the center is held in a closely locked grip often consisting of a pawn on each side directly opposing each other. The attacking side stations his pieces in and around the center and occupies the central field to the greatest possible extent. The defending side seeks to drive the enemy pieces away from the central field or to exchange them off.

Tip: Memorizing annotated grandmaster games is a great way to improve your understanding of chess strategy principles.

## Initiative

Tip: Initiative refers to the ability to continually make threats against the opposing position. This implies that the opponent has to respond to the threats and cannot find time to make the improvements he/she would like to make to their position. The initiative could be only a temporary advantage and the player with the initiative must play very accurately in order to make the most of it.

## Chess tactics training

Effective chess tactics training consists of more than simply solving 100's of chess tactics puzzles. The image suggests the main focus areas of an effective chess tactics training program:


## Visualization skills

The ability to visualize an imaginary position that would result if certain moves were to be made, plays a vital role in the effectiveness with which you will be able to spot tactical opportunities in your games. Training your chess visualization skills should be a priority in your chess tactics training schedule, particularly if you have not focused on this skill before.

## Sources for chess visualization training:

1. The Chess Visualization Training site has several good exercises to train your visualization ability.
2. The Chess Trainer Software is a wonderful java program that provides many different exercises to train your visualization skills.

## Tactical themes and patterns

When you are training chess tactics and chess combinations by solving numerous chess puzzles, seek to understand the elements in the chess problems which makes the combination possible. Solving chess problems this way will help you hone your "tactical awareness" in the sense that you will instinctively search for chess tactics motifs and themes in positions where you notice the presence of the typical elements of chess tactics.

## Tactical motifs

${ }^{`}$ There are four major tactical motifs:

1. Geometrical (points and lines)
2. Functional (duty, job, or role)
3. Restrictive (inhibits movement), and
4. Promotional (promoting a pawn).


At least one of the following factors must be present for a combination to work:

1. Undefended pieces,
2. Inadequately defended pieces
3. An exposed (unsafe) king, and
4. A majority of force or material in a certain part of the board.

The most important tactical themes are:

1. Pins,
2. Double Attacks, and
3. Back Rank Mates.

When looking for tactics always watch out for all

1. Checks
2. Captures, and
3. Queen Checks
for both you and your opponent

## Tactical training cycles

Hot tip: Wading through 100's or 1000's of chess tactics puzzles will surely improve your tactical skills, but consider this method: Focus on a smaller amount of tactic sets (i.e. a set of 20 selected tactics) and repeat them daily (or weekly, however you prefer) until you can literally do them all with your eyes closed. Training chess tactics this way helps you to identify themes and patterns much faster.

## Chess calculation

Chess calculation consists of selecting candidate moves, determining where they would lead to and assessing the outcome of the possible variations. This step starts with deciding whether or not the position actually requires you to calculate variations! In many positions the correct move(s) can be identified by simply considering the strategic aspects of the position. It remains a good idea to do a tactical check and a blunder check for a move in a position where you regard it not necessary to calculate variations. The need to carefully calculate a variation is often not necessary in positions where:

1. The pawn structures are fixed in a closed position, or
2. When it is obvious that a certain move is best or required.

Here are some suggestions on how to train your chess calculation ability:
3. Analyze complicated positions from annotated grandmaster games as deeply as you can. Compare your findings with the analysis of the grandmaster (or a strong chess engine).
4. Training chess tactics will also benefit the development of your calculation skill.
5. Invest time to train your visualization skill - it will have a tremendous impact on your calculation ability.

## Sources for chess tactics training:

6. The Step Method Daily Puzzles are wonderful for gaining tactical ideas and improving one's tactical calculation.
7. Chesstempo.com is a great website for chess tactics that come from actual games and they also have a page which illustrates typical chess tactics motives that commonly appear in chess games.
8. www.ideachess.com has a great election of $1,2,3$, and 4 move checkmates in addition to easy, moderate and difficult tactics.
9. CT ART (Chess tactics art) is a popular program which consists of more than 2200 chess tactics sorted according to themes. This provides a good way to train chess tactics according to their themes.

## Chess Opening training

Opening training consists of more than simply memorizing lines and variations. The main focus of an effective chess opening training program is to:

1. Learn the ideas and themes in the opening
2. Play the opening in blitz games to quickly gain experience with a wide variety of positions
3. Learn the standard traps for both sides in your chosen openings

There are two software programs that are intended for opening training. These software programs are:

1. Chess Openings Wizard by Mike Leahy is a great program for training you on your openings, playing though games and completing opening analysis.
2. Chess Position Trainer by Stefan Renzewitz is an awesome free software program that trains you specifically on any opening repertoire you choose. You create your own repertoire and the software will train you and provide statistical feedback on how well you know the opening.

## Chess Ending training

Ending training consists of gaining knowledge and experience in a wide variety of endgame situations. The main focus is to learn the material so as to be able to recall it at will during an actual game when needed:

Although there are many books on the subject, there are few sources that are useful in terms of practice. One of the best sources for practice is a chess endgame simulator found at:

1. Chess Endgame Simulator which will allow you to practice various endgames online. His practice will give you the practical experience and training required to improve your endgame skill.

## Develop a clear chess decision making process

Not following a clear thought process when considering candidate moves could be one of the main culprits in hampering your chess improvement! Essentially, your decision making process is a simple set of questions designed to stimulate your chess memory for the position at hand.

The steps in your decision making process provide a framework within which to structure these questions. The diagram below suggests such a framework which outlines the main steps in the decision making process:


## Position evaluation

Your assessment of the position will by and large be the result of the chess knowledge that your mind associates with the situation on the board. In order to recall as much as possible of the relevant knowledge stored in your memory, consider these main elements of positional evaluation:

1. The situation in the centre,
2. Safety of the respective kings,
3. Roles of all the pieces and
4. The pawn structures.

Your understanding of these strategic elements will have a profound impact on your evaluation of the position.

## Tactical check

Positions that appear rather quiet can suddenly explode into an unexpected display of tactical combinations. It is this latent tension in the game that should at all times be monitored by doing a "tactical check" on your candidate move. The effectiveness of this "safety check" will depend on your knowledge of the various tactical themes and patterns. To help you hone your sense of danger in positions that could appear safe to an inexperienced player, be sure to spend a lot of your chess training time on chess tactics training.

## Blunder check

Even chess grandmasters occasionally make a blunder which even a beginner chess player would identify as a grave mistake. Adopt the habit of doing a "blunder check" in the moment before you make the actual move. This is done by simply taking a "fresh look" at your move and making sure you haven't missed any obvious

1. Checks,
2. Captures,
3. Pins or
4. Forks.

The blunder check can help you minimize those embarrassing moves which instantly lose the game.

## Note:

Your personal decision making framework is one you can regularly seek to adjust and improve. Make a list of the questions you feel helps you to recall your memorized chess knowledge. Initially you might have to regularly remind yourself to follow a thinking method, but eventually it becomes a powerful habit which helps you to regularly find the best move according to your current ability.

## To-Do List

Once every 3-10 moves (this varies a lot according to the position's characteristics), in the keypositions, you should make a "TO DO" list. In this list, you should add all the things you want to accomplish in the given position.

Therefore you can add things like:

1. Finish development,
2. Occupy an open file/diagonal,
3. Create weaknesses in the opponent's position,
4. Improve the position of your pieces (one of the most important things to be taken into consideration) and so on.

The "TO DO" list should be created at critical moments, when the characteristics of the position has changed, is about to change or when some of your "to do" tasks have been completed.

## Sample Chess Training Program

Reference: http://chess-training.blogspot.com/search/label/Ending

Putting together a training schedule for yourself sounds like an easy task. No problem! Just study openings on Monday, do some Middlgame strategy on Tuesday, then perhaps some endgames on Wednesday, and sprinkle some online games here and there.

But in reality, it's difficult to continue to do because we, as chess players, are averse to doing anything that is not really fun. Half way through your opening sessions you may find yourself suddenly immersed in a bullet tournament on ICC or Playchess. Endings? Bah! I know Lucena's position - that's good enough.

It is a lack of discipline in our non-playing activities that keep us right where we are in the rating scale. ANY player can steadily improve if they apply a basic schedule to their studies and become persistent in executing those studies. In fact, I would venture that outside of any extraordinary talent, any player can see improvement up to the 2100-2200 rating level using this study plan as a guide.

This 4-day study plan encompasses all facets of chess study as well as playing blitz and rapid games on a steady basis, which is important if you want to get feedback from your play for obvious reasons. The study plan rotates on this 4-day schedule. After you complete Day 4, revert back to Day 1 the next day.

|  | Minimum Training Quantity |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Day | Experience (Games) | Strategy | Opening | Ending | Tactics | Extra |
| 1 | GSt4x5m | SSt1h | OSt30m | 0 | TSo8e | VSo25e |
| 2 | GSt1; GPI4x5m | 0 | OSt9p |  | TSo8e | VSo25e |
| 3 | GPI4x5m | GPI2x10m | SSt20m | 0 | ESo15e | TSo8e |
| 4 | VSt6p | VSo15e | TSo8e | VSo25e |  |  |
| After Day 4, start again back on Day 1 and cycle training from Day 1 though 4 |  |  |  |  |  |  |


| Key1: | Topics/Exercises |
| :---: | :--- |
| $\mathbf{E}$ | Endings |
| $\mathbf{G}$ | Games |
| $\mathbf{0}$ | Openings |
| $\mathbf{S}$ | Strategy |
| $\mathbf{T}$ | Tactics |
| $\mathbf{V}$ | Visualization |
| Key2: | Actions |
| St | Study |
| So | Solve |
| PI | Play (4x 5min, $2 \times 10 \mathrm{~min}, 2 \times 15 \mathrm{~min}$ games $)$ |
| Key3: | Training Allotment |

\# Number of Exercises/topics/pages/minutes/hours
e,m,p.t Exercises/minutes/pages/topics

| Instructions: How to read the schedule notation |  |
| :--- | :--- |
| Example | TSo8e |
| 1: | The first letter "T" means Tactics <br>  <br>  <br>  <br>  <br> The second two letters "So" means Solve <br> e.g. Solve 8 Tactical exercises |
| During Day 1, according to this schedule you would: |  |
| Study 4 Grandmaster games. <br> Study Chess Strategy for 1 hour <br> Study Opening variations for 30 minutes <br> Solve 8 Tactical exercises <br> If you had extra time, you would solve 25 Visualization exercises |  |

Solving generally involves a concrete number of items to solve. For example, you might solve 25 tactical exercises or puzzles rather than spend a specified amount of time solving puzzles.

However, studying often involves either a specified amount of time or a set number of topics or pages to review. In the case of time, the first step in any study plan is to know how much time you have to spend doing it. This is where the \# of units (minutes, hours etc.) comes into play. If, for example, you can devote 4 hours a day to studying chess, then your Study unit of time would normally be set in hours

In this method, it does not matter that you complete all the activities for a particular day on that day, but it is important to maintain the order in which you do that activity. It may take you 2 days to complete the Day1 program, so be it.

To implement this study program effectively, we need to have at our disposal some good chess books on each subject. Consider obtaining a good Opening, Strategy, and Endgame book, as well as a tactical puzzles book.

For openings, I personally like the "Starting Out" series by Everyman Chess. For strategy, Pachman's Modern Chess Strategy or Secrets of Modern Chess Strategy by Watson are good books. For endgames, A Guide to Chess Endings by Euwe and Hooper, Fundamental Chess Endings by Muller and Lamprecht, or Just The Facts by Alburt are all good books and all very readable. You might prefer other books. These are just suggestions.

