Describe Fitts and Posners phases of learning and explain how you would structure practices to enhance performance

Fitts and Posner's phases of learning includes three stages of learning, these are the Cognitive Stage, Associative Stage and the Autonom ous Stage.

As learners begin to gain a new skill, they are confronted with some very specific, cognitvely leaning problems. To explain for this cognitive activity, Fitts and Posner called the first stage of learning the cognitive stage. This stage is noticeable by a large number of errors in the performance, and the nature of the errors being committed tends to be gross. For example, a beginning golf student gets the ball in the air sometimes, but also it dribbles on the ground at other times. These results are caused because of some very gross errors made by the student during the golf swing. The cognitive stage is also seen by performance that is highly inconsistent. Although beginners may know that they are doing something wrong, they are generally not conscious of exactly what should be done differently for the next time to improve. Learning occurs through trial and error and correct performances must be reinforced through feedback. Information is best given through demonstration – visual guidance – or through manual guidance, if appropriate. So overall, they need specific information that will let the beginners correct what they have done wrong.

The second stage of learning in the Fitts and Posner model is called the associative stage. The quality of the cognitive activity that characterized the cognitive stage changes during the associative stage. A lot of the essential fundamentals or mechanics of the skill have to some level be learnt. The errors are fewer and less gross than in the cognitive stage. The learners are now concentrating on refining the skill. The learners have now developed an ability to notice some of their own errors when performing a task. This ability to locate their errors is still not perfect, but they are able to identify some of the errors. This then provides the learners with specific guidelines about how to continue practice. For example the golfer slices the ball. He or she does not always get the most distance or height out of the shot. On the other hand, the student can see that he or she did not move weight properly, grip the club correctly etc.
These types of detections are rather gross but represent a positive change in the cource of the learning process. Also at the associative stage the changing of performance from one effort to another also begins to decrease. In this stage feedback should encourage the performer to 'feel'what a good performance is like – Kinaesthesis.

After practice and experience of the first two stages with the skill, the learner then moves into the last stage of learning called the autonomous stage. At this stage the skill has become almost automatic or consistent. The individual does not have to go through the entire production of the skill but he/she has learned to perform most of the skill without thinking about it at all. Motor programmes are well learnt and stored in long-term memory therefore there is a shorter reaction time. Highly skilled tennis players concentrate on the ball and some of the

particular adjustments that they must make in their normal serve to produce a particular shot.
Another example would be where skilled dancers do not think about the individual steps of the routine, because they have become automatic but they have now learnt to concentrate on some of the more important pha ses of the routine that could be particularly difficult.
In the autonomous phase peformers are now able to not only detect their own errors but also make the proper corrections to improve it. Also in this stage the changing of the day-to-day performance has become very small. This autonomous stage is resulted by a large amount of practice which allows performers to produce a reaction without having to concentrate on the whole movement. To remain in this phase constant practice is required to keep reinforcing the motor programmes.

Fitts and Posner state that "*there is a good deal of similarity between highly practice skills and reflexes.*"
The above statement does not mean that learning stops or that the individual fails to make errors but that there is a need for consious attention to the motor act itself.
Therefore, the highly skilled tennis player is able to serve without having to concentrate on the particular basics of the serve like how to hold the racket or toss the ball etc. but he/she can concentrate on how to produce a serve that will land in a certain part of the court.

Below shows the three stages of the Fitts and Posner model as parts of a continuum of practice time. The cognitive stage represents the first part of the continuum. This is then followed by the associative stage and then the autonomous stage.

Cognitive Stage	Associative Stage
Autonomous Stage	Practice Time---------->

The way I would structure practices to enhance performance is by finding out what the practice is for and then what skill it is – closed, discrete, open etc. The aspects of creating a practice involves four elements to the process. These are Instructing, Demonstrating, Confirming and Applying.
First of all I would choose if the practice is going to be a fixed practice (drills), Variable practice, massed practice or distributed.
If I were to structure a practice for a performance of a tennis serve I would use Fixed practice, this is particularly useful for closed, discrete skills. It allows repetition of the performance to strengthen motor programme. Ideally, the skill should be 'over learnt' to allow attention to be focused elsewhere. Over learning is the practice time spent beyond the time it takes to perfect the skill.
So for this practice I would instruct it by maybe verbal or written, or contained on a worksheet. I would also have to make sure the pupil understands the task and knows what the targets are and can begin to practice. Once I have done that

I would need to give intrinsic feedback and provide a lot of information. I then need to test to see what the pupil has leant so far.
After that I would then perform the serve or it may be appropriate for a peer to demonstrate the skill. This then lets the pupil have a model of the perfect serve in his memory to work from (mental rehearsal). But the demonstration must be a good one. I then get to the applying part of the skill. Here the pupil needs to practice the serve in a planned situation so that it would help him/her to use it in a real game situation. Also near the end the pupil will need to practice skills such as opposed, unopposed, whole, and part -whole.