Preparatory Phase
At the beginning, when I was first observing, I found that my player struggles with her preparation of the dig. No flexion of the knee was occurring and therefore there was also no flexion of the hip. Using my knowledge of functional anatomy, I was able to break down the movements and decide how I could improve the preparatory phase of the dig to help her execute successfully. As part of my lesson plan I created a drill where the cognitive learner was required to do shuttle runs and when reaching the cones squatting down with her arms in the correct dig position. This allowed the player to focus on her preparation of the dig and improving force summation while doing this. The drill would be a massed skill because it was repeated over and over again; this is to make the movement of getting a lower body position to become natural and automatic. This would be quite boring for the player though and I may have been better to use distributed practice instead this is also advised for someone at the cognitive stage of learning, which my teacher reminded me about later. The activity is a gross skill as it uses the major muscles of the body to perform it. The agonist muscle in the squat (flexion of the knee) is the hamstrings and the antagonist muscle is the quadriceps. These muscles would work together in order to create flexion of the knees and hips, which then helped to create a lower position and centre of gravity. I decided that the drill would be in a closed environment with the player totally in control of the situation, as she progressed I added in a ball when she reached the cone this made the activity move from self-paced to externally paced. The external factor of the drill was the ball being lobbed to her that I was in charge of. By adding the ball, it also increased her arousal levels and therefore she exerted more energy into the drill making it successful. I knew she was trying harder as her speed between the cones and return of the ball became smoother. Because my player is a cognitive learner I would require her to use some of her prior knowledge, I would compare the squat to the sitting down on a seat so my player had something to go off.

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When she was completing the drill, she asked a lot of questions that is very common in a cognitive learning phase, she also made many errors, this would be a positive thing because it would give her knowledge of performance and the next time she would try something new in order to find the right way to perform the skill. I took into consideration the factors affecting her skill learning such as: she is a female, she is a junior student, that she has no prior knowledge of volleyball and that she is a fit and healthy young girl. For the second session, I feel that she moved into the associative phase of learning, therefore my goal for her would be to practice and refine the new skills put the skills into the game. The next skill I did with my player was refining where she held her hands and presenting where the correct position to hold them is. I demonstrated the correct placement of the arms and also showed her a diagram in order to be completely clear and have no misunderstanding. The arms elbow joint should be extended and the hands in supination with thumbs together making the forearm and hands as flat as possible. Another biomechanical principle that is important for the early phase is stability so I explained the importance of having a low centre of gravity, a wide base of support and making sure that she moved to the ball so that her line of gravity was inside the base of support. This would make her as stable as possible for more control over her dig.

In the execution phase the player struggled to create any force summation because she did not transfer her weight when executing the dig. Also, the arms were bent when the hands make contact with the ball, this makes it fairly difficult for the volleyball to go into the direction she desires. Because her arms were bent it made the angle of release out of her control. Even though her angle of release was not very good (this should be quite high to give the next player the opportunity to get under the ball to set or spike), her strength was the height of release as she managed to exert a large amount of force, it was just out of control. I created a lesson plan including a drill that would focus solely on the extension of the elbows and transferring the momentum to the ball. The drill that I designed was simple, I placed the player behind a line then I would stand about 5m ahead her and then lob the ball to her, throwing it about a metre ahead of her so she would be forced to move to the ball, extend her elbows and flex her knees in order to hit the ball with her hands underneath the volleyball. This worked on transferring the weight of her body, and forcing her arm to be as long as possible. I made my player perform this skill many times, changing the direction or where the ball goes in order to keep up her level of arousal. I think that external feedback from myself helped such as when I told her she should be aiming to get the ball back above my head as if I was the setter in the game situation and she began to do this I would say " great that would have been perfect for a set " and "try to get the ball a bit higher so I can get underneath" I think this linked it more to the game situation and improved her performance when she got back into the game, in the final game she got 5 balls above her teams

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setter, so this showed it did help. The associative stage can last for a long time, therefore I focussed on the new skill and refining the performance of this particular drill. The associative learner, which my player is, still had to go over and over these drills because they do not come naturally to them. For this session, the practise would be externally paced as I was in control of when and where the ball was being thrown. This would make the activity more difficult for my player but this is necessary if she was to improve and become an autonomous learner. My players force levels were very low because she was not positioning her arms and hands in the correct position. For the dig to be performed successfully the player has to be able to slow down the speed of the ball in order for the next player to either set of spike it. The drills I completed focused on this and as she improved I made the ball move harder and harder so that she could really focus on taking the speed out of the ball. She actually got quite good at this and when she went back into the game she was able to take some quite hard shots and dig them over the setter's head.

Follow through Phase

In task one when I observed my player performing the dig skill I saw she struggled with the execution of the dig, particularly when she was finishing the follow-through of the dig. My player found it difficult to extend her legs and hips after she had made contact with the ball (this was as she was not flexing them properly in the early phases) so I used a fun obstacle course that included small ladders and mini hurdles. This activity allowed her to focus on the importance of extending the knees and hips.

After a few times of running though this course, I then instructed her to hold her arms in the position of the dig in order to reinforce the idea of where the hands are meant to be held, (two skills in one). The agonistic pair of muscles would be the hamstrings and the quadriceps. The hamstrings being the antagonist muscle and the quadriceps being the agonist for extension to occur. The joint involved in these movements is the knee and hip joints.

The main biomechanical skill that I focused on when planning this lesson was force summation as it plays a large role in how the follow through phase is performed. With force summation, it is about involving all the body part in the movement in order to gain maximum force., I focused on using the hip/thigh quadriceps and hamstrings, trunk, abdominals, shoulder/arm deltoids and hand then wrist, flexor and extensor digitorum, then the force generated increases and the force is transferred to the volleyball she is hitting. By extending the knees and hips she would be able to use sequencing and timing of her body segments it allows my player to exert a maximum amount of force and be able to control the force. So, through my sessions I used anatomy and biomechanics including use of muscles for force summation, stability as well as being aware of her stages of learning and what type of drills and feedback I should give her to help her learn the dig better and improve how she uses this in the game.