

Student 3: Low Merit

NZQA Intended for teacher use only

In my observation of watching a volleyball student I constructed a learning programme to help them improve their performance of a volleyball dig. When observing the students, I noticed that they made mistakes and were not confident with their forearm pass (dig). In this evaluation I will comment on the biophysical skills of functional of the anatomy, Biomechanics and Skill learning and sports psychology.

The first focus point that came to my attention was the body positing of the student. Body positioning is needed at the start of the dig when the player is balanced and their centre of gravity is lowered. Learning how to improve their body positioning will include how to use their leg muscles. This will then start a sequence of movements and help to create greater summation of force.

When first observing the student, who is in the initial stages of learning the forearm pass (cognitive stage), they lacked in the correct technique, which I can relate to the functional anatomy concepts. When in the preparatory phase they did not have flexed knees or hips. The muscles of the quadriceps (agonist) and hamstrings (antagonist) were not used to their full strength because the student did not flex their knees or hips in order to use the strength of the quadriceps and other muscles in the legs. The students struggled with the functional anatomy and body positioning because the student was not confident with the forearm technique and were unsure how to correctly demonstrate it. This is why I made body positioning a point to focus on. The activity I have made was to help correct the students body positioning and make them more confident with the forearm pass. The student was stable but they needed to be more staggered with their positioning of the feet so that they could be more balanced and prepared for the oncoming volleyball. The force summation of the student needed attention, they struggled in the lower body but did well on the upper body with good technique in the elbows and shoulders. The activity I choose to use for body positioning is closed because the student is in the first stage (cognitive) of learning and need to focus solely at one thing at a time, for them to be able to do the drill correctly. The drill is massed which means that the activity is repetitive so that the student can understand and can comprehend what skill they are learning and why. The activity is given is guided by instructions because the student is in the cognitive stages, they need to listen and watch someone else perform the activity so that they can understand and get the idea of the correct technique. Body positioning is extremely important in a forearm pass because it gives the student the maximum potential to perform a powerful dig.

The second focus point is the technique base of support. Wide base of support is needed during all stages of the forearm pass, the skill is to keep the student balanced and give maximum potential for a powerful dig. Having a lower centre of gravity and keeping the line of gravity within the base of support means that the student can successfully produce a dig without becoming off balance. The student that I observed struggled with lowering their body and making sure they were underneath it in order to be balanced. The student lacked in flexing their knees and hips so that they could become balanced. The muscles that are used to control this movement are the

1

gastrocnemius and soleus muscles, hamstrings-agonist (including biceps femoris), quadriceps-antagonist (including rectus femoris) and iliopsoas (hip flexor). There was plantar flexion seen in the ankles to help keep balance but all lower body movement was limited. Focusing on getting the wide base of support is important to the student as they can become more confident with the forearm pass.

The biomechanical factors of stability is used to keep a wide base of support so that the student will stay balanced throughout the forearm pass. In my activity, stability is used to help correct base of support by the student practicing squatting on a chair. The activity I made for wide base of support is both an open and closed drill. It is massed at the start and has the variation at the end which can be seen as an open skill. The activity is an instruction based activity meaning that there is someone showing the students how to do the drill; this is needed as the students are still learning how to perform the forearm pass. The activity can also be used in a competition where the students are split up into two group and verse each other for the fastest time to complete the drill. Having a competitive environment is important because it keeps students involved and motivates them to participate in the activity with a positive attitude.

The third focus point is that of extension and flexion. Extension of the arms (triceps brachii- agonist, biceps brachii-antagonist) and flexion of the knees is needed in all stages of the volleyball forearm pass; extension and flexion are used to keep balance and to produce maximum force throughout the dig. It is vital to have good extension of the knees (quadriceps-agonist, hamstrings-antagonist) to keep the student upright and also to make sure they produce a propelling dig either to a team mate or to the opposition. The lack of extension/flexion was seen when observing the student throughout the forearm pass, the student struggled with flexing and extending the knees throughout the forearm pass, they also lacked in flexing the hips up in the movement to the follow through. Biomechanical factors of the third focus phase was the lack of force summation throughout the body. The student struggled with finding a sequence throughout the body to produce maximum power in the forearm pass. The extension/ flexion activity I made focuses on getting the student to focus solely on body movements and to get the right sequence throughout the body. The activity is closed because students are in the beginning phases of learning and need to focus on one thing at a time. The activity is a like a circuit and can be made into a competition once students have got the hang of the small activities and understand wants being asked of them. The type of instruction is that it is guided so that the cognitive learners can listen and have the opportunity to ask questions before performing the drill.

Concluding of my evaluation of the student performing a forearm pass I have seen the strengths' and weaknesses of the student and have put together three activities that hopefully will correct the student's technique. The skills of body positioning, wide base of support and extension/flexion were all focus points the student struggled with. From evaluating the student and using the four biophysical principals of functional anatomy, biomechanical factor, skill learning and sports psychology I have produced three activities that will help the technique of a cognitive volleyball student.