

Congratulations Rebecca van Rooyen

Rebecca has been awarded a Gold CREST medal for her research on agility in netball in particular the techniques of changing direction in a 90 degree turn and exploding into a 5 metre sprint, which are “subcategories” of technical agility. She designed an agility training program with subsequent collection and analysis to show that the students that undertook her training programme improved significantly to those that did not.



Rebecca says that “Agility is defined as a “rapid whole-body movement with change of velocity or direction in response to a stimulus”. The three main components of agility are physical, perceptual and technical. This study looked at the techniques of changing direction in a 90 degree turn and exploding into a 5 meter sprint, which are “subcategories” of technical agility.

Agility is one important aspect of the game of netball. To have the ability to change direction in response to a stimulus without losing too much speed has the potential to give players an edge over their competition. There is a lack of research on agility in netball, which results in coaches not specifically addressing and training these important skills. Despite this, there is a lot of agility equipment that coaches are encouraged to purchase to improve their players ability. Currently there is not a test that produces consistently valid results that allows coaches to assess whether players are improving their agility. This study aimed to improve the technical agility of a group of netballers. A 6 week training programme was designed to improve the agility of Year 9 and 10 students based on data collected from analyzing technical agility tests “

Rebecca’s Investigation One involved two netball teams of nine who took part in initial, progress and final testing to design the 6 week specific technical agility training programme. The testing required subjects to turn 90° and sprint 5 meters. Only 6 subject’s results from each team were valid which meant measuring their improvement was not achieved, but the analysis of their testing allowed the training programme to be formed.

Investigation Two then used thirty-nine subjects from local secondary school physical education classes, tested to determine whether specifically targeting technical agility results in subjects turning and sprinting faster. Twenty-three of the 39 subjects were allocated to a training group, while the remaining 16 participants were allocated to a control group. Rebecca found that those that incorporated the technical agility training programme (training group) into their regular physical education curriculum improved their change of direction and sprint times quite considerably compared to the control group. The training group's total sprint times were faster by 0.14 ± 0.1 seconds ($P < 0.001$) compared to the control group whose times didn't significantly change. The control group's change of direction times also didn't significantly change compared to the training group whose times were faster by 0.12 ± 0.03 seconds ($P < 0.001$). Both groups improved their split sprint times, with the training group being 0.04 seconds faster than the control group's improvement.

Rebecca concluded that these strong improvement in times by the training group shows that specifically targeting technical agility (even over a relatively short time period of 6 weeks) in regular training programmes improves change of direction and sprinting times. This means that coaches wanting to improve their player's technical agility must target the components with their drills. This project shows the improvement of technically trained students compared to other students, however doesn't provide a method of measuring the subject's specific agility capability. Rebecca says that further research needs to be done to determine a reliable test that coaches can confidently use to determine the current level of agility of their players.

Congratulations to Rebecca and her supervising teacher, Dr. Paul Lowe.