

Testing & Training

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After trialling the Total Reaction System with our 7-11 years old students over a four week period, we have seen improvement in concentration and awareness in the throwing and catching skills of the students. With the assistance of the Total Reaction Screen it put students in an artificial pressured situation outside of a game situation. With the students having a blocked view of the object they had to rely on pure reaction when in first sight of the object. We were seeing a high percentage of students getting in a set position, with hands out and in a loaded position before the objects were being delivered.

With my extensive involvement in competitive and representative rugby, I see the Total Reaction Screen as a beneficial tool that will help the development of fundamental skills that will lead into continued development in whatever sports path students will take. The more that you are able to replicate a pressured game like situation, the more likely students will respond in a positive manner in a game situation.

ECC Testing and Training Regime (Oct – Nov 2015)

Specialist AFL Group (14 – 15 yrs)

Program Determinants

Reference ASI – FAQs – Drills to be Used?

“Each Total Reaction Screen comes with suggested drills relating to the type of screen for that particular sport. These are by no means the only drills that can be used, and other drills will no doubt be devised by the users, trainers and coaches. The types of drills used will only be limited by the imagination of the trainer, coach and the user.”

Refer to AFL Skills/Drills Testing & Training Document

Session Outline

Session 1: October 21st, 9:00 – 11:00 AM

- Introduce athletes to the TRS, session dominantly run by Rob.
- All athletes participated, 2 TRS used, 25 athletes.
- Demonstration of TRS using an ‘out in front’ mark.
- Testing pre-TRS, stationary out in front mark (5m)
- Testing with TRS, stationary out in front mark (5m)
- Testing pre-TRS, stationary out in front mark (4m)
- Testing with TRS, stationary out in front mark (4m)
- Testing pre-TRS, moving out in front mark (5m)
- Testing with TRS, moving out in front mark (5m)
- Testing pre-TRS, moving out in front mark (4m)
- Testing with TRS, moving out in front mark (4m)
- Conclusion and recap of skills.

Session 2: November 4th, 9:50 – 11:00 AM

- Re-introduce the TRS.
- 1 TRS used, 13 athletes (Group 1)
- Testing pre-TRS, stationary out in front mark (4m) (5 attempts)
- Testing with TRS, stationary out in front mark (4m) (5 attempts)
- Testing pre-TRS, stationary possess the ball in any way (along the ground, high mark, etc.) (4m) (3 attempts).
- Testing with TRS, stationary possess the ball in any way (along the ground, high mark, etc.) (4m) (5 attempts).
- Testing pre-TRS, contested mark out in front (forward at 4m, defender start at 5m and can move in, token pressure) (3 attempts).
- Testing with TRS, contested mark out in front (forward at 4m, defender start at 5m and can move in, token pressure) (5 attempts)
- Testing with TRS, contested mark out in front (forward at 4m, defender at 4m, both can move in, full pressure, both attempting to mark) (5 attempts)
- Conclusion and recap of skills.

Session 3: November 18th, 9:50 – 11:00 AM

- Re-introduce the TRS.
- 1 TRS used, 13 athletes (Group 2)
- Testing pre-TRS, stationary out in front mark (4m) (5 attempts)
- Testing with TRS, stationary out in front mark (4m) (5 attempts)
- Testing pre-TRS, stationary possess the ball in any way (along the ground, high mark, etc.) (4m) (3 attempts).
- Testing with TRS, stationary possess the ball in any way (along the ground, high mark, etc.) (4m) (5 attempts).
- Testing pre-TRS, contested mark out in front (forward at 4m, defender start at 5m and can move in, token pressure) (3 attempts).
- Testing with TRS, contested mark out in front (forward at 4m, defender start at 5m and can move in, token pressure) (5 attempts)
- Testing with TRS, contested mark out in front (forward at 4m, defender at 4m, both can move in, full pressure, both attempting to mark) (5 attempts)
- Conclusion and recap of skills.

Session 4: November 25th, 9:50 – 11:00 AM

- Testing with the TRS, contested mark out in front (forward at 4m, defender at 4m, both can move in, full pressure, both attempting to mark) (5 attempts)
- Elimination competition, stationary out in front marking. 1 medium kick at 5m followed by 1 hard kick at 5m. This continued down until they were at 1m. a = Athletes have 1 life at each level.
- Conclusion and recap of skills.

Group 1 (Sessions 1, 2, 4)	Group 2 (Sessions 1, 3)
<ol style="list-style-type: none"> 1. Participant 1 2. Participant 2 3. Participant 3 4. Participant 4 5. Participant 5 6. Participant 6 7. Participant 7 8. Participant 8 9. Participant 9 10. Participant 10 11. Participant 11 12. Participant 12 13. Participant 13 	<ol style="list-style-type: none"> 14. Participant 14 15. Participant 15 16. Participant 16 17. Participant 17 18. Participant 18 19. Participant 19 20. Participant 20 21. Participant 21 22. Participant 22 23. Participant 23 24. Participant 24 25. Participant 25

Program Determinants

Reference ASI – FAQ's – How can we gauge improvement?

“First use of the Total Reaction Screen should be at a distance from the screen that feels comfortable to the user. Once the user understands how the system operates the users may project the object faster through or under the screen. The capacity to achieve the same results with a faster moving object gauges the users improvement. Once competency is achieved at that distance from the screen the user shortens the distance giving participants less response and reaction time. Continued reduction in distance while maintaining the same competency standards similarly gauges the user's improvement.”

Evidence of Athlete Improvement:

Evidence of athlete improvement in Group 2 is hard to gauge due to the lack of sessions and attendance, therefore we will focus on Group 1 who took part in 3 70 minute sessions. The results show strong improvement in the athletes who started at a low level during Session 1.

Program Determinants

Reference ASI – FAQs – What are the benefits of using a Total Reaction Screen?

“The Total Reaction Screen is specifically designed to take athletes outside of their comfort zone. It is a training aid intended to produce artificial pressured environments that require game related skills to be performed at a higher level or standard. Use of the Total Reaction Screen produces an environment which places users in situations where they will learn, use, practice, correct and refine their skills. Users of the system will achieve greater anticipation, reaction, timing and decision-making qualities necessary to automatically perform at a higher level.”

Athlete #	Session 1: Static marking (5m) %	Session 1: Static marking (4m) %	Session 4: Static marking (5m) %	Session 4: Static marking (4m) %	Session 4: Static marking (3m) %	Session 4: Static marking (2m) %
10	60	60	100	100	100	33
11	60	80	100	100	100	33
7	80	60	100	100	100	66
2	80	80	100	100	100	33
13	100	80	100	100	66	33
3	60	60	100	100	100	0

Program Determinants

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As seen from the above statistics which looks at the athletes who had a subpar performance in Session 1, there have been major improvements across the three sessions. Not only were they able to get 100% from both the 5m and 4m lines which were previously tested but they also improved from the 3m line which they had not previously been tested from. Once the athletes reached the 2m line results started to decline. However informal testing showed that with more repetitions from the 2m line their percentage improved.

Program Determinants

Reference ASI – FAQs – How long will it take to get results?

“The Total Reaction Screen is designed to improve all levels of users – from novices to professionals. In short, this will depend on the standard of your current skill level. Professionals may already have some of the skills and may be seeking improvement through consistency. In that example improvement may take longer than for a novice seeking improvement in their skill level. Novices would expect to see improvement rapidly after only a few sessions of screen use.”

Suggestions of improvement:

- More time with the athletes. Some athletes only got two sessions, it's hard/impossible to gauge any kind of improvement after two sessions.
- Originally it was planned to have 25 athletes using one TRS. We decided to split the class so that there were only 13 athletes/session although they only used the TRS every second session. The ratio of athletes: TRS is still too high, athletes spend 12/13ths of their time watching and this results in lower overall results.

- Athletes kicking skills were too poor/inconsistent to let them kick through the machine which meant I had to kick the football. This in turn decreased the quality of the data as I was unable to write down the results as they happened.
- Informality of the recording/reporting process: to suit.

— *Marshall, M 2016, Total Reaction Screen, report, Churchlands Primary School, delivered 25 August 2016..*