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# **Evaluating the impact of a coach development intervention for improving coaching practices in junior football (soccer): The ‘MASTER’ pilot study.**

## **Abstract**

The aim of this pilot study was to evaluate the impact of a novel coach development intervention (MASTER) on coaching practices of football coaches. The study involved six coaches (of 10-12 year olds) from one representative football club (XXX, Australia February-July 2017). The 15-week multi-component intervention included a 2 hr face-to-face workshop, on-going mentoring, modelled training sessions, peer assessments and group discussions. MASTER is underpinned by positive coaching and game-based coaching practices and aimed to educate coaches on how to implement and operationalise a number of evidence-based coaching elements. At baseline and immediate post-intervention coaches were filmed and evaluated using a modified version of the Coach Analysis Intervention System. Using linear mixed model analysis, significant changes in coaching practices were observed for time spent performing playing-form activities [ $+15.4\%$  (95% CI 6.01-24.79)( $t(15)=3.5, P=0.003$ ), type of feedback provided to players [ $t(6)=26.62, P < 0.001$ ], and coach interventions [ $t(3) = 41.06, P < 0.001$ ]. No significant difference in active learning time resulted. A coach development program focusing on positive coaching and game sense demonstrated effectiveness for improving coaching practices of football coaches during training sessions. Further large-scale trials will build evidence for the utility of MASTER for guiding coaching practices in football and other sporting codes.

Keywords:

coaching; football; education; training; game-based; mentor

Running title (75 characters max): MASTER Coaching Pilot Study

## **Introduction**

Sports coaches have the responsibility for developing a wide range of player outcomes, including the development of technical and tactical skills required to perform or play the game (Ford, Yates, & Williams, 2010). There are two main components in this teaching and learning process that form an individual's coaching practices: 1) the training activities in which the coach engages their players; and 2) the instructional or coaching behaviours used by a coach. There is strong evidence to show that coaching practices can affect player success, enjoyment, wellbeing, confidence levels, motivation and retention in positive and negative ways (Vella, Oades, & Crowe, 2011). Yet coach accreditation courses or high-quality coach development programs are not always available or accessible to all coaches, and the consequences of poor coaching in sport are of great concern (Australian Sports Commission, 2017).

Poor instructional or “negative” coaching behaviours can lead to the development of a negative sporting environment – and a negative sporting experience for young players. In a negative sporting environment, positive feedback and encouragement provided by the coach is usually limited, punishment or ridicule when players make mistakes is common, and coaches often over emphasise winning and focus on player weaknesses (rather than strengths) (Balaguer et al., 2012; Gearity & Murray, 2011). Young players exposed to poor coaching behaviours often experience increased anxiety levels, reduced levels of perceived competence and self-confidence, reduced capacity to focus and concentrate, lower levels of well-being, a decreased willingness to attempt tasks, and lower levels of motivation (Baker, Côté, & Hawes, 2000; Balaguer et al., 2012). Developing a positive coaching environment where coaches promote creativity, intelligence and team harmony is the key to ensuring a positive sporting experience for players (Harvey & Jarrett, 2014). Coaches create a positive environment when they support player's needs and wants, encourage player input, use positive feedback and encouragement, and highlight and reward player strengths, effort and development (Balaguer et al., 2012). Studies show that players who train and play in a positive sporting environment exhibit increased levels of enjoyment, motivation, success and well-being (Balaguer et al., 2012), and are more likely to develop a lifelong appreciation of sport (Harvey & Jarrett, 2014).

The choice of activities used by a coach during training sessions also influence the degree of learning and success a player achieves through sport. In order to facilitate high quality learning within

a positive sporting environment, a shift away from direct instruction within a traditional delivery model, towards the provision of exploratory learning activities within the context of the game is recommended (games-based approach) (Miller et al., 2017; Williams & Hodges, 2005). Sports coaches of team sports typically implement skill-drill type practice activities (known as training-form activity), where isolated and pre-determined skills are practised in a repetitive manner with the intent of developing skill mastery and autonomous levels of skill execution (Ford et al., 2010). Training-form activity usually involves players in individual skill practice (e.g., dribbling, juggling, dodging) or group training activities involving no opposition (e.g., passing drills, dribbling around cones, shooting into an open goal, set play practice). In a traditional delivery model, coaches use training-form activities at the start of training sessions, followed by the gradual introduction of match-like activities or small-sided games (known as playing-form activities). Implementing opposed play via playing-form activity increases the demands on the learner and is most effective when it targets sport and game specific competencies (Ford et al., 2010; Williams & Hodges, 2005).

In the past, the focus on technique development via training-form activities has dominated coaching in sport, especially in junior level or community sports (Ford et al., 2010). Despite strong evidence supporting the effectiveness of using a games-based approach with young players (Miller et al., 2015; Miller et al., 2017; Pill, 2012), many coaches only progress towards playing-form activities as players become older and more skilled (Williams & Hodges, 2005). Using a games-based approach enables coaches to maximise the volume and quality of playing-form activity players are exposed to, while simultaneously developing tactical and strategy-based thinking, facilitating learning and improving the motor skills required to play a particular sport (Miller et al., 2015; Miller et al., 2017; Pill, 2012). Furthermore, this approach is more enjoyable for young players (Harvey & Jarrett, 2014).

In Australia, football (soccer) is currently the most popular team sport among Australian children, drawing approximately 18% of the club sport population (over 1 million children in 2015) (Australian Sports Commission, 2016). However, recruitment and retention of accredited coaches who deliver high quality coaching programs is an enduring concern. Levels of perceived coaching ability and perceived coaching effectiveness have emerged as crucial and determining factors for retaining

sports coaches (Guzmán, Kingston, Grijalbo, & Solomon, 2015). Furthermore, enjoyment of coaching, coaching success and support from the sporting community (parents, the club, and the sporting organisation) are key influences on whether volunteer coaches continue to coach (Rundle-Thiele & Auld, 2009). High player dropout rates from sport (especially during adolescence) is also a global issue, with 24% - 36% of players aged 10-18 years dropping out annually (Møllerlækken, Lorås, & Pedersen, 2015; Temple & Crane, 2016). The Australian Sports Commission (now SPORTAUS) has recognised that there is currently great variance in the quality of coaching in youth sport across all sporting codes, directly impacting on attrition rates and the holistic development of young players (Australian Sports Commission, 2017). The discussion paper published by SPORTAUS proposes that community level coaching staff need both formal (e.g., accreditation courses) and informal learning opportunities (such as mentoring and/or other face-to-face training programs) to develop essential coaching behaviours (Australian Sports Commission, 2017).

Among community level competition, coaches are often volunteers and parents with limited coaching experience and / or training, and who commonly replicate the coaching practices that they have encountered through their own sporting experiences (i.e., generally a traditional skill-drill approach) (Lemyre, Trudel, & Durand-Bush, 2007). At higher levels of competition, O'Connor and colleagues' (2018) report that qualified Australian Youth Premier League football coaches (n=34) are implementing aspects of games-based coaching, with coaches including the use of questioning, constraints-led pedagogy, and playing-form activity in training sessions. However, O'Connor emphasises that the majority of coaches in the study continue to present playing-form activities within a traditional coaching session structure, whereby coaches presented playing-form activities using direct instruction (rather than exploration and guidance) after a series of training-form activities (O'Connor, Larkin, & Williams, 2018). Despite the absence of community level coaches in the study, this shift away from a traditional approach to coaching is positive, and may be the result of content provided to coaches during the current accreditation processes.

It is clear that coaches need access to programs or strategies that ensure they are suitably prepared and supported in their coaching roles, and develop the core coaching competencies needed to

deliver high quality coaching programs within a positive sporting environment. The aim of this pilot study was to investigate the impact of a novel 15-week coach development intervention (MASTER) for improving coaching practices of junior representative football coaches.

## **Materials and Methods**

### ***Research design***

This pilot study was conducted between January and July 2017, in NSW, Australia. Ethics approval was obtained from the University of XXXXX Human Research Ethics Committee. All coaches in the Northern XXX Football XXXXX entry-level representative program coaching girls and boys aged 8-12 years old were invited to participate in this study (irrespective of experience and qualifications). A convenience sample of six coaches was sought with the first six supplying consent included in the study. A member of the research team conducted a brief presentation and information session at the monthly football club meeting, and handed out information statements to coaches. Signed informed consent of coaches was required for participation in this study.

### ***MASTER Intervention***

Our coach education program (known as MASTER) was designed by our research team from the University of XXXXXX who are all experienced sports coaches, athletes, educators and researchers in the fields of education, physical activity, health and sports coaching. MASTER was designed to address current issues in sports coaching in junior football (lack of coach development programs and coaching quality). The foundation of MASTER is ‘positive coaching’, which is promoted and fostered through games-based coaching practices and targets six essential elements of sports coaching shown to improve physical, and health and wellbeing outcomes in children. Coaches learned to use our evidence-based and user-friendly MASTER framework as a practical tool to plan and deliver high quality sports sessions that cater for what children want (fun, game play, success, skill development, play in a team, exercise), and what

children need to maximise learning and reach their potential in sport. A detailed outline of the MASTER Framework and supporting evidence is provided in Table 1.

\*\*\*\*Table 1 near here\*\*\*\*

MASTER was implemented using a coach learning process involving three phases: The MASTER Coach Development Workshop, Mentoring and the Coach Assessment and Reflection.

*Phase 1 (MASTER Coach Development Workshop):* Coaches participated in a 2-hour theory-based face-to-face education workshop held at the XXXX Football headquarters. The workshop introduced the MASTER framework, provided coaches with the theoretical underpinnings and practical applications of the MASTER elements, and provided coaches with opportunities to plan sessions based on the MASTER framework (within the existing football curriculum). Coaches were provided with a PowerPoint presentation, printed course booklet, MASTER checklist, MASTER training session notepad, access to video footage examples of the MASTER framework in action, printed (and explained) examples of football training activities and homework tasks.

*Phase 2 (Mentoring):* this 4-week phase involved coaches implementing MASTER elements in their normal training sessions (2 x 1 ½ hour sessions per week) under the guidance of the coach mentor (a member of the research team -BJ). The mentor spent one session per week (1 ½ hours) for four weeks rotating between coaches to assist in the application of the MASTER framework and provided on-going support via a purpose designed website (including access to a discussion platform, example session activities, and MASTER learning activities). This format was utilised as a scalable approach for the possibility of training ‘Club Coaching Co-ordinators’ to deliver MASTER in the future.

*Phase 3 (Coach Assessment and Reflection Session):* The mentor prepared and implement a two hour training session designed to highlighting important aspects of the MASTER framework and games-based coaching practices. Coaches were involved in evaluating the mentor using the MASTER

observation checklist, and a group discussion based on the checklist and coach observations facilitated the learning episode. This collaborative practice incorporates what is known about professional learning communities (DuFour, 2004) and instructional ‘rounds’ (Elmore, 2007), and is now common in higher educational settings. The literature supports that learning and understanding is optimised when learners are involved in the feedback process, explicitly learn to become assessors, have a clear framework in which to evaluate a performance, and provide feedback through a discussion or dialogue (Eather, Riley, Miller, & Jones, 2017; Merry, Price, Carless, & Taras, 2013). Following the coach assessment and reflection session, coaches continued implementing MASTER strategies in their normal training sessions and were required to undertake a peer observation of a colleague alongside the coach mentor (using the MASTER observation checklist). Feedback and professional dialogue followed the peer observation sessions. Peer dialogue has shown to be an effective and well-received method for improving coaching practices (Eather et al., 2017).

### ***Measures***

Assessment of coaching practices were conducted at baseline (February / March 2017) and immediate post intervention – 15-weeks (June / July 2017) by the research team. Coaching practices were evaluated using systematic observation of three videoed training sessions (chest mounted Go Pro Hero 3). A modified version of the Coach Analysis Intervention System (CAIS) (Cushion, Harvey, Muir, & Nelson, 2012) was used to measure coach behaviour. The CAIS has established validity and reliability, with previous use in youth coaching investigations (O’Connor, Larkin, & Williams, 2017; M. Partington & Cushion, 2013; Mark Partington, Cushion, & Harvey, 2014). The objective was to assess changes in coaching with regard to time use (e.g., framing, instruction, activity and coaching intervention), practice state (training or playing-form), and coaching behaviours utilized when players are engaged in activities during sessions (activity behaviours and intervention behaviours). Table 2 outlines the observation measures. Behaviours most likely to be utilized by coaches for the purposes of modifying player behaviours were selected from the CAIS (Harvey, Cushion, Cope, & Muir, 2013), with several coaching behaviours related to feedback combined within a single feedback



category. Concurrent feedback (in action feedback or instructions) of player actions (e.g., ‘*come around to the right*’, ‘*press*’, ‘*mark up now*’) was excluded from the coded behaviours as is not considered as effective for enhancing learning as terminal feedback (Sigrist, Rauter, Riener, & Wolf, 2013), and was not a focus of the MASTER intervention. A separate category of coach intervention was included in this analysis and evaluated small group or whole group coach intervention periods.

#### *Outcomes:*

- 1) Type of activities included in each training session (training-form, playing-form, inactive or other) and time spent performing the activity (expressed as a percentage);
- 2) Number of active participants during each training activity (measure of active learning time)(Godbout, Brunelle, & Tousignant, 1983);
- 3) Length and type of interventions undertaken by the coach (procedural, coach intervention, questioning); and
- 4) Type of feedback given to players by the coach during each training activity (positive, negative, hustle, punishment, corrective).

All video coding was completed by one member of the research team (a qualified professional football coach with an Advanced “B” licence and an Advanced “C Youth” licence issued by Football Federation Australia). Assessor training included rating of coaching video previously rated by two senior authors (AM and NE) (>95% agreement rate required).

\*\*\*\*Table 2 near here\*\*\*\*

#### *Process evaluation*

The feasibility of the program was examined using measures of recruitment (i.e., evaluation of the recruitment process, dissemination of information and obtaining informed consent), retention (i.e., how many coaches completed the program and participated in assessments pre

and post-intervention), adherence (i.e., the degree to which coaches followed the MASTER program), and satisfaction (i.e., level of coach satisfaction of the program measured via a short evaluation questionnaire).

## **Statistical methods**

Statistical analyses were conducted using PASW Statistics 24 (SPSS Inc. Chicago, IL) software and alpha levels were set at  $p < 0.05$ . Linear mixed models were fitted to compare differences between time points (baseline and follow-up) for continuous variables. Time was assessed as fixed effects within the model, with coach included as a random intercept to account for potential clustering at the level of the coach. Differences of means and 95% confidence intervals (CIs) were determined using the linear mixed models. Analyses included all participants. Chi-squared ( $\chi^2$ ) tests were employed to assess changes in the distribution of categorical variables. Descriptive statistics and bar graphs comparing time points were produced to investigate potential changes in the distribution of coaching behaviours. Quantitative evaluation responses were analysed using an inductive analysis where an initial exploration of the verbal responses was used to identify any patterns or themes (Best & Kahn, 2006). Representative quotes are presented in the results.

## **Results**

Six coaches (5 male; 1 female) participated in this study (Ages: 3 = 18-25 years, 1 = 26-40 years, 1 = 40+ years).

*Changes in primary outcome:* There was a significant increase in the proportion of training sessions spent implementing playing-form activities [+15.4% (95% CI 6.01-24.79;  $t(15) = 3.5$ ,  $P = 0.003$  or mean increase of 20.97min] (Figure 1). There was no significant change in the distribution of time for breaks, frame, reflection, intervention and activity within training sessions over the intervention period [ $t(5) = 15$ ,  $P = 0.605$ ]. Full results are displayed in Table 1.

\*\*\*\*Figure 1 near here\*\*\*\*

*Changes in secondary outcomes:* There was a significant change in the type of feedback given to players ( $t(6) = 26.62, P < 0.001$ ). Notably, hustle feedback reduced by an average of 0.69 repetitions per minute (RPM) ( $SD = 0.22$ ), positive feedback increasing on average by 0.13 RPM ( $SD = 0.51$ ) and performance-related feedback increased by 0.15 RPM ( $SD = 0.18$ ). There was also a significant change in the time allocated by coaches to performing specified types of interventions over the intervention period ( $t(3) = 41.06, P < 0.001$ ). Specifically, a reduction in procedural interventions (mean change = -33.42 95% CI -49.89—16.94), a decline in coach solved interventions (mean change = -8.46% 95% CI -16.42—0.49), increased questioning (mean change = 34.52 95% CI 27.24-61.76) and multiple interventions (mean change = 5.15 95% CI 10.43-12.83) were demonstrated. No significant change in the active learning time (ALT) within sessions was evident over the intervention period [ $+5.62$  (95% CI = -5.33-16.59)  $t(15) = 1.09, P = 0.291$ ]. Results are displayed in Tables 2-4.

\*\*\*\*Table 2-5 near here\*\*\*\*

#### *Process Evaluation:*

Six coaches attending the information session provided immediate consent to participate in the study, with all of six coaches retained at follow-up assessments. All six coaches attended the MASTER Coaching workshop, weekly training sessions, peer evaluations and the mentor assessment sessions. A summary of coach satisfaction data is presented in Table 5.

## **Discussion**

The aim of this pilot study was to evaluate the feasibility and impact of a novel 15-week coach development intervention (MASTER) on coaching practices of football coaches. The intervention led to significant improvements in coaching practices with regard to game-based coaching (increased in the amount of playing-form activities implemented) and the motivational environment created (increased use of positive coaching behaviours with regard to feedback and interventions) during training sessions.

Currently there are two distinct development pathways for football coaches in Australia - the Community and Advanced pathways. Both pathways provide coaches with information on session planning and the use of a games-sense approach (but no training in implementing either), through low dose discrete / short term coaching courses (i.e., community courses run for two days or less and advance courses run for 8 days over a short period). Neither pathway coaching provides coaches with information or strategies around creating a positive sporting environment or maximising learning and engagement in sessions. The coaching literature also highlights that unless sports coaches participate in on-going professional development and have access to simple and practical coaching tools, they tend to resort back to existing practices (Mark Partington & Cushion, 2011). Consequently, a large proportion of football coaches in Australia, especially volunteers or inexperienced coaches at the community level, may not have the knowledge, skills or understanding of how to create a positive sporting environment, or maximise the learning and success achieved through football coaching sessions (O'Connor et al., 2017, 2018).

Total time players spent within training activities in training sessions did not change over the 15-week intervention period, but importantly, the time dedicated to playing-form activities within training sessions increased by 15.4% (and training-form activities declined correspondingly). Our findings are encouraging and demonstrate the potential of the MASTER program for developing game-based coaching practices. Coaches were provided with 1) information regarding the benefits game-based approach for improving player outcomes; 2) training in transforming traditional training-form activities to playing-form activities; 3) training in using the MASTER framework to plan, implement and evaluate training sessions; and 4) mentoring and peer feedback on session planning and delivery. Our improvements in playing-form activities are consistent with previous studies conducted in the sport setting and school physical education lessons where there was a specific emphasis on increasing playing-form activities provided by coaches and teachers (Gray & Sproule, 2011; Harvey, Cushion, Wegis, & Massa-Gonzalez, 2010; Miller et al., 2016; Miller et al., 2017).

Significant changes in the types of feedback provided by coaches during training sessions was also evident in this study. The reduction in hustle and negative comments (by 23% and 8% of total

feedback respectfully) indicates that the coaches improved their feedback practices. Combined with increased levels of positive feedback and feedback targeting improvements in performance by coaches, these changes in feedback practices are likely to have created a more positive training environment. Previous research has highlighted that positive and performance-related feedback is essential for maintaining intrinsic motivation (Noble, Vermillion, & Foster, 2016; Vansteenkiste & Deci, 2003) and the learning of motor skills in children (Ávila, Chiviacowsky, Wulf, & Lewthwaite, 2012). Whilst other research studies have evaluated coach feedback practices and their impact on player outcomes (Karagiannis & Pill, 2017; O'Connor et al., 2017; Mark Partington & Cushion, 2011), this is the first study to provide coaches with a practical tool (MASTER) and coach mentoring program to facilitate changes in feedback practices in a community sport setting.

This study took a novel approach to improving coaching practices by exploring the type and time coaches spend intervening in coaching sessions. Interventions performed during sessions included coaches delivering procedural instructions (e.g., how to set up and perform an activity or skill), providing ideas or comments (e.g., informing players what they are doing incorrectly or telling them how to improve their performance), or facilitating questioning to engage the players in the learning process (and combinations of the above). Although the time coaches spent performing interventions did not differ considerably over the study period, there was a significant change in the type of intervention coaches used, with a significant reduction in procedural interventions (mean change reduction 33.42% of intervention time) and coach interventions (mean change reduction 8.46% of intervention time) noted. Conversely, questioning increased by 34.52%. Previous research highlights that coaches understand the importance of using questioning for the development of players, however there is a prevailing issue regarding the capacity of coaches to construct meaningful questions and to facilitate discussion with players to solve game-related problems (Harvey, Cushion, & Massa-Gonzalez, 2010; O'Connor et al., 2017; Roberts, 2011). The MASTER program specifically addressed this issue by providing coaches with education, training and assessment of effective use of questioning with junior football players. O'Connor et al (2017) investigated the type of questions and feedback given to players during game-based football activities and found that coaches tend to provide direct instructions at a

relative high frequency (5 seconds of instruction per 20 seconds of activity) – suggesting over coaching (O'Connor et al., 2017). Evidence supports that over coaching may contribute to lower retention of skills and a reduction in performance levels under pressure (O'Connor et al., 2017; Raab, 2003; Smeeton, Williams, Hodges, & Ward, 2005). Coaches in the MASTER study provided a substantially lower frequency of instructions compared to previous studies (3.47 seconds for every 20 second of activity or 17.35% of activity time).

Our findings demonstrate an increase in time spent conducting frame and reflections, and a reduction of break time between activities. Within the quality learning environment, an effective frame enables the coach to outline and discuss the quality of performance they are expecting players to exhibit and the criteria for referencing achievement of performance goals (Ladwig & King, 2003). For example, coaches in the study were asked provide a concise overview of the session focus, how the focus would be explored through playing-form activities in the session, and the relevance of the focus for playing the game of football during the frame. The reflection is used after each activity and / or at the end of the session to promote learning. Reflecting on ones behaviours, attitudes and ideas also promotes critical thinking and problem solving (Carr, 1988) - which are key skills required to succeed in the game of football and in most sporting codes. In this study, coaches used the MASTER framework to guide all aspects of training sessions, including the frame and reflection. Through effective use of questioning and discussion regarding session activities, session aims, performance levels and success during these training segments, coaches are able to create quality-learning environments. This area of sport coaching pedagogy has received little attention. Given that education literature supports the inclusion of explicit quality criteria in creating quality learning environments (Ladwig & King, 2003), and supports the utility of dialogue as an important learning tool (Blair & McGinty, 2013), the inclusion of these elements as a research focus will build evidence for their impact on coaching effectiveness.

The program utilised the skills of an experienced mentor to demonstrate and discuss the application of MASTER for establishing a positive learning environment and delivering a high quality training. Mentoring in sports coaching is gaining acceptance and popularity as a means of developing high-quality coaches (Australian Sports Commission (SPORTAUS), 2010; Jones, Harris, & Miles,

2009). The mentor created and delivered model training sessions and session plans, and facilitated discussion around the value of MASTER for improve the quality of football training resources and sessions. Through discussion, coaches engaged in the feedback cycle and demonstrate their understanding of the elements of MASTER in a practical and ‘real life’ coaching situation with their peers. Peer feedback is used effectively in the education sector for facilitate improvements in teaching practices, transforming educational perspectives and developing collegiality (Bell & Mladenovic, 2008). Peer dialogue feedback has shown to be most effective when learners are provided with training and practice in peer feedback, and a set criteria or a framework in which to make judgements and initiate dialogue with peers regarding the observed performance (Price, Handley, & Millar, 2011) – as provided in MASTER.

### ***Strengths and Limitations***

This pilot study takes a novel approach to improving the quality of coaching in football through the development and implementation of a novel coach-education program. MASTER is the first program to use a coach mentoring structure, provide a practical and feasible framework for coaches to use during session planning, delivery and evaluation, promote the use of game-based pedagogy, and facilitate the creation of quality learning environments (using elements consistent with the Quality Teaching framework). In comparison to most one-off or low dose coaching programs, this 15- week program provided coaches with ongoing support and training, and opportunities to apply the MASTER principles in a ‘real-world’ setting.

A limitation of this pilot study includes the small convenient sample, limiting the generalisability of the findings. We would recommend the implementation of a large scale randomised controlled trial to build evidence for the feasibility and effectiveness of MASTER. Furthermore, an evaluation of the impact of coach change on player outcomes is needed (e.g., skill development, game play success, enjoyment, motivation, and well-being), and an assessment of the suitability of MASTER for developing coaches of all levels (i.e. advanced v community accredited coaches) and sporting codes (e.g., netball, rugby, hockey).

## Conclusion

MASTER is a novel coach development program designed to address prevailing issues in football coaching. It provides on-going education and training for football coaches, and aims to equip them with the understanding and skills needed to implement high quality football sessions within a positive sporting environment. The MASTER study successfully increase the amount of playing-form activities coaches used within training sessions, and improved the quality of feedback and interventions provided by coaches.

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