Exploring coach's perceptions of the feasibility of a Movement Oriented Games Based Assessment within 'Made to Play' programmes

Date of submission: 5th May 2020
Date of resubmission: 27th July 2020
Date of second resubmission: 27th October 2020

Abstract

Coaches can provide an appropriate environment for children to develop a range of movement skills, but there is a dearth of research exploring the creation of appropriate resources to support the coach in developing and assessing children's Complex Movement Skills. There is also a lack of research around coaches' perceived feasibility of the limited resources in this area. Therefore, the purpose of this study was to design and then assess the feasibility of a Movement Oriented Games Based Assessment (MOGBA) for children aged 8 - 12 years, to be used by coaches within 'Made to Play' programmes. Thirteen coaches from across the USA and UK used pilot materials to assess the feasibility of MOGBA over a nine-week period. Individual, paired and focus group interviews were structured and data thematically analyzed using Bowen et al. feasibility framework. Findings suggested that MOGBA provided a welcomed and much needed enhancement to their programmes, with effective use of technology enhanced coaching. Coaching involved notions of pedagogy and assessment, with issues emerging around class size and complexity of assessment. Coaches often used MOGBA covertly and flavored the resource to the sport being delivered and this revealed the capability of children to coaches not viewed before.

Keywords

Coaching, Children, Movement competence, Resource, Feasibility

Exploring coach's perceptions of the feasibility of a Movement Oriented Games Based Assessment within 'Made to Play' programmes

The rate that individuals acquire and become competent in performing movement tasks is influenced by physical attributes (e.g. height, genetics, maturity) and environmental conditions, such as opportunities for practice, instruction, encouragement and feedback (Robinson & Goodway, 2009). Globally, evidence suggests that children's levels of movement competence are low (Adolph et al., 2010; Behan et al., 2019; Morgan et al., 2013; Morley et al., 2015). Therefore, the development of effective coaches and coaching environments which support children's movement development is a priority. Sports coaches can provide opportunities for children to develop cognitively, emotionally and physically through their sporting experiences as a result of the positive behaviours they exhibit (Côté & Gilbert, 2009; Holt, 2008; Weiss, 2008).

The vast majority of athlete development models extol the centrality of movement competence as the foundation for lifelong participation in sport (Bailey & Morley, 2006; Balyi & Williams, 2009; Côté & Vierimaa, 2014; Lloyd & Oliver, 2012). Furthermore, international coaching frameworks, such as the European Sport Coaching Framework, clearly articulate the need for coaches to develop children's movement competence as a primary function of their role as an effective coach (Lara-Bercial et al., 2017). Whilst coaching associations in some countries offer courses that support coach development in coaching children's movement (Coaching Association of Canada, 2020; UK Coaching, 2020), there is no empirical evidence to suggest that these competencies are being effectively developed within a coaching environment and to what extent.

Côté and Gilbert (2009) suggest that differing contexts require differing coaching objectives and these change dependent on whether the context is predominantly related to children's performance or participation. Effective *performance* coaches focus on one sport, teach rules of competition, have increasingly greater demands for deliberate practice and teach and assess a broad range of attributes including physical, technical, perceptual and mental skills (Côté and Gilbert, 2009). Effective *participation* coaches, on the other hand, emphasise playful fun in low organisation games, played in a mastery-oriented motivational climate, whilst teaching and assessing Fundamental Movement Skills (FMS) by focusing on the child first (Côté and Gilbert, 2009). Coaches have a role to play in children's development if they employ coaching objectives related to the development of children's movement competence that aligns with the developmentally appropriate support they require at key developmental stages (Lloyd & Oliver, 2012).

Movement competence is defined as the ability to perform various movement skills (e.g. running, kicking, jumping, throwing) in a skilful manner (Goodway, Ozmun, & Gallahue, 2019; Haga, Pedersen, & Sigmundsson, 2008). In early stages of movement development, children learn these FMS within three discrete categories: locomotor, object control and stability skills (Goodway, et al., 2019). FMS are considered the foundation skills that enable the specialised sequences of movement required for participation in many organised and non-organised physical activities for children and adolescents (Goodway et al., 2019; Hulteen, Morgan, Barnett, Stodden, & Lubans, 2018).

A key developmental stage within a child's movement development is the transition from FMS to Complex Movement Skills (CMS) (Burton & Miller, 1998;

Goodway et al., 2019). CMS are combinations of FMS that are refined and adapted in increasingly complex environments that can be employed in a range of sports and physical activity movement settings, as children socially orientate to these environments. As with FMS, at the CMS development phase, improvements are seen in the way in which the child performs the movement skill or pattern with greater accuracy, co-ordination and control (Goodway et al., 2019). Moreover, as a way of extending our definition of movement competence from skilfulness in isolation, it is recognised that more competent individuals would be able to combine and adapt movements in response to the changing constraints of the environment (Ng & Button, 2018). Empirical research suggests that adaptive movement variability, or "the individual's behaviours to dynamically changing, interacting constraints, individually perceived and encountered", is essential to performance across a range of sports (Seifert, Button & Davids, 2013, p.167). Whilst postulations exist that propose a typical age range of 7-12 years for this transition (Goodway et al., 2019), it remains clear that it is not age dependent, with studies showing that less than half of children, aged 9-15 years, demonstrated proficiency in certain FMS (Lubans, Morgan, Cliff, Barnett & Okely, (2012).

Whilst coaches can rely on a range of physiological and psychological assessments to measure a number of athlete outcomes, there is a dearth of assessments at their disposal to measure children's and adolescents' movement competence within a participation setting. Cross-sectional assessments of children's FMS, as objective measures of movement competence, have been validated and refined (Bardid, Vannozzi, Logan, Hardy, & Barnett, 2019). These include assessments such as the Test of Gross Motor Development-3 (Ulrich, 2000) the Movement Assessment Battery for Children (Henderson, Sugden & Barnett, 2007) and Peabody Development Scales

(Folio & Fewell, 2000) with most assessments typically being employed to measure children's movement skills competence before and after a movement or physical activity intervention. However, these assessments have been predominantly designed for use by clinicians and researchers (Wick et al., 2017; Giblin, Collins, & Button, 2014). As such, their suitability for use in a coaching environment is questionable in terms of the ecological validity of their inclusion in dynamic, typical, settings where children can fully demonstrate their movement adaptability (Ng & Button, 2018). It is difficult to establish ecological validity due to the isolated skills that are being assessed and the closed environment in which they are assessed. Furthermore, with one assessor assessing one child at a time, the duration of each child's assessment ranges from 20-60 minutes and would therefore detract from the mainstay of the activity.

Assessing children's movement competence in CMS in a meaningful and authentic way has, until recently, received very little attention in the literature. Movement assessment frameworks, such as the Canadian Assessment Movement Skill and Agility (Lander, Morgan, Salmon, & Barnett, 2016) and Dragon Challenge (Tyler, Foweather, Mackintosh, & Stratton, 2018) have been recently designed to assess children's movement competence in a dynamic and fluid way as they transition between their use of FMS and CMS. Whilst these objective measures of CMS are beginning to emerge, there remains an ecological issue in the way that these movements continue to be assessed in isolation, therefore negating the critical interaction that children experience within some activities.

Teachers have reported challenges in assessing children's movement competence, given the constraints of large group sizes and limited time available within Physical Education (PE) lessons (Morley, van Rossum, Richardson, & Foweather,

2019). It is argued here that coaches, with typically limited professional development opportunities in comparison to that of teachers, would experience similar difficulties if attempting to use existing movement assessments. Given the shortfalls presented, it is questionable as to whether these existing assessment protocols would provide a meaningful and authentic assessment of the child's movement competence in their typical coaching contexts.

There remains a distinct lack of understanding of the interdependency between assessment, coaching and learning in a similar way to that routinely utilised pedagogically by teachers within school PE (Hay & Penney, 2009). There is a lack of attention paid to this interdependency within athlete development models (Balyi & Williams, 2009; Cote & Vierimaa, 2014; Lloyd & Oliver, 2012) and coach development frameworks (Lara-Bercial, 2017). It seems that the use of assessment that subsequently informs coaching interventions and guides an individual athlete's progress and performance is neglected. This limitation of a coach's learning and practice is perhaps unsurprising given the proposed limitations that exist within formal coach development, such as the lack of actionable advice (Bowes & Jones, 2006) and being highly theoretically driven (Cushion, Armour, & Jones, 2006). Furthermore, others have proposed a need to move towards familiarising coaches with the essence of the activity they are being asked to develop in relation to an athlete's developmental needs (Dieffenbach 2019; Jones, Armour, & Potrac, 2002). It is proposed here that this move would entail coaches having an understanding of the relationship between assessment, coaching and learning in order to provide athlete-centred progress.

The Made to Play (MTP) context

The MTP initiative aims to support 25 million children in 105 programs across 21 countries by providing 'opportunities to get children moving so that they can lead happier, healthier and more successful lives' (Nike, 2020). The programs supported by MTP are wide-ranging, containing the full spectrum of individual (e.g. running, skateboarding) and team (e.g. basketball, soccer) sports. MTP programs are delivered in a range of settings (e.g. schools, recreational centres, sports clubs) using varying models and patterns of delivery in both participation and performance domains, with group sizes typically between 15 and 30 children. To achieve MTP's aim, one of its objectives is to support programs in developing the movement competence of children aged 8 - 12 years by providing a delivery and assessment framework for coaches.

To support the objective of MTP and address the shortfall in the field, the Movement Oriented Games Based Assessment (MOGBA) was designed as a child-centred (8 - 12 years), developmentally appropriate, range of games-based activities, with an integrated assessment framework for coaches to develop and assess children's CMS competence within a dynamic and fluid game environment. As Dudley (2015) suggests, understanding the context in which a child's movement is developed and assessed is as important as any intervention used to support the child's development. Thus, to enable the effective large-scale integration of MOGBA into routine coaching practice, as necessary within MTP, it was deemed essential to investigate the feasibility of MOGBA from the coaches' perspective within their own contexts. Furthermore, given the need to actively enlist research users in the process of integrative knowledge translation (Boland, Kothari, McCutcheon, & Graham, 2020), the coaches' voice is crucial. Therefore, the aim of the current project was to design MOGBA and assess coaches' perceptions of its feasibility within a selection of MTP programmes.

Methods

Researcher positioning

Reflexivity is used as a way of ensuring trustworthiness within qualitative research and is achieved through self-reflection on potential biases resulting from the researchers' sociocultural experiences (Korstjens & Moser, 2018). Researchers were from a range of backgrounds, homogenised by their involvement in teacher or coach education. All of the researchers resided in Universities, in either Education or Sport Science departments, and had specialisms in coach development, children's movement development, or game development. All of the researchers were involved in the initial development of the MOGBA resource. It became clear that using developmentally appropriate practice for children and adolescents and ensuring ecological validity were core ideologies of the research team.

Methodologically, we had to consider how our research approach could affect our ability to explore essence and nuance in how coaches articulated their perceptions related to the feasibility of MOGBA in their existing programmes. We were fundamentally interested in making sense of the socially constructed, mind-dependent realities (Sparkes and Smith, 2014) of coaches, leading to our research being underpinned by an interpretivist ontology (Bryman, 2015).

Design

The development of MOGBA involved two phases; (A) a three-staged resource design and development phase involving academics and students in the UK (Morley & Van Rossum, 2019), and (B) a feasibility trial of a reduced version of MOGBA over a

nine week period with a range of 'Made to Play' programmes across the USA and the UK. Academics formed an advisory group to meet the needs of the project by providing expertise in a range of fields related to the project outcomes (e.g. coach education; games-based theory, children's movement competence).

MOGBA consisted of fourteen activity cards, (see Fig. 1 for an example) with the front of the card illustrating the game as well as sections describing 'what you need' (equipment and space), 'set up like this', 'keep it safe' and 'change the game'. There is also a 'change the challenge' section on the front of the card. 'Change the challenge' provides guidance for coaches on how to differentiate the activity to meet the diverse needs of children in relation to notions of Space, Effort and Relationships (Bartenieff & Lewis, 1980; Goodway, et al., 2019). On the reverse of the card, there is an assessment framework, adapted from previous movement frameworks (Burton, & Miller, 1998; Goodway, et al., 2019; Graham, Holt-Hale, & Parker, 2013), which illustrates the movement being assessed and provides criteria for the coach to use to score the child's performance. The assessment had four focal aspects of observation (i.e. head, arms, legs and body) alongside which numerical values could be recorded for each child assessed.

[Insert Fig. 1 here]

MOGBA was designed to encourage coaches to view coaching, learning and assessment as interdependent aspects of a positive learning environment (Gardner, 2012; Newton, 2007). Whilst assessment can be seen as diagnostic, formative and summative, the formative capacity of assessment to inform subsequent intervention is seldom captured. In contrast, MOGBA combines coaching, learning and assessment to ensure that the assessment becomes formative in a way that contributes to the child's

learning incrementally throughout the approach. For example, it is envisaged that the coach could present a MOGBA activity, assess movement competence within the activity and then use information gleaned from the assessment to challenge children differently in future iterations of the same activity or within further phases of the resource. In this sense, it is hoped that 'assessment *for* learning' replaces 'assessment *of* learning', typically seen in coaching environments (Hay, Dickens, Crudgington, & Engstrom, 2012).

Quick Response (QR) codes were used on the resource to support the ability of the coach to readily acquire the relevant information needed to establish the activity and assessment focus through viewing a 10 - 15 second video. Video footage consisted of a group of children playing the activity (on the front of the card) or an individual child being assessed within the activity (on the back of the card). This level of visual support has been recognised as an effective mode of information dissemination in previous developments of similar resources used in professional development environments (Mehendale, Masurekar, Nemade, & Shivthare, 2017).

MOGBA activities were designed as innovative, dynamic and fun activities that were non-sport specific. Increasing the complexity and demands placed upon children sequentially across three distinct phases in relation to how they combine, adapt and refine their movement competencies, alongside their ability to understand, manipulate and exploit space, effort and relationships was deemed appropriate. Phase 1 activities involved simple movement tasks. These were often performed at an individual level and this phase was seen as an opportunity for children to use previously acquired FMS in more complex situations, but in a way that supported the transition of a child's movement development from FMS to CMS in a progressive and staged way.

Phase 2 activities built upon the re-introduction of FMS in more complex activities experienced in Phase 1 to further explore the child's ability to refine, adapt, combine and apply FMS in more pressured environments. Phase 2 began to introduce complexities associated with the utilization of perceptual-cognitive skills, such as anticipation and decision-making (William, & Ford, 2008), needed in partner, small group work or team games. Phase 3 activities were situated as close to forms of game play typically found within sports delivered by MTP programs, without the constraints of rules and associated with a specific game. This progressive nature of activity development is appropriate given observations of players coupling their actions in both space and time to information unfolding from key environmental and task constraints during performance (Travassos, Araújo, Duarte & McGarry, 2012).

Participants

A shortlist of twenty two coaches within a range of MTP programmes was provided by the co-ordinator of Nike's Social and Community Impact team, who co-ordinated MTP on behalf of Nike; we requested programmes with a range of participants in terms of the type of sport (individual/team), size of program and experience of coaches (length of time coaching within MTP). Thirteen coaches responded to form a purposive sample who all agreed to use MOGBA as part of their curriculum whist coaching children in their respective programmes (Table 1). Most interviews were conducted one-to-one with coaches from different programmes (Denzel, Imogen, Sian, Kayla, Sam and David). One interview involved two participants from the same programme (Suzie and Clinton) and one focus group interview was conducted with five practitioners (Sara, Tahira, Rani, Caitlin and Kai)

from the same MTP programme. Different formats were deemed necessary to capture differing participant perspectives between smaller programmes where one or two coaches used MOGBA and larger programmes where a number of coaches used the resource.

[Insert Table 1 here]

Procedures

Responding to recommendations from Phase A (Morley & Van Rossum, 2019) of the overall research project, a re-developed MOGBA resource consisting of six activities; 3 each from Phase 1 (T-time, Space Invaders 1 and Square Ball) and Phase 2 (End zone, Corner ball and Space Invaders 2) and covering all movement categories of Stability, Object control and Locomotion was shared with participants, by e-mail. Following the participants' receipt of the MOGBA resource, the first author delivered a one-hour webinar to participating coaches, consisting of (1) a brief introduction to the project, (2) an outline of children's movement development, (3) an explanation of the various components of the activity cards and (4) an understanding of next steps for delivery and evaluation. The participants were asked to use MOGBA within their programmes over a nine-week period in the way that they felt most appropriate between April and June 2019. As this was a feasibility study, we were interested in gaining insight into constructs such as 'adaptation' and 'integration' of MOGBA into the coaches' existing programmes. We felt that providing as unstructured an approach as possible would allow coaches to recognise which activities and aspects of MOGBA were important for their individual programmes. Fidelity, in terms of dosage and treatment will be assessed more closely in future studies within the context of a randomised control trial.

The authors met at regular intervals prior to the interviews to discuss the interview schedule. As we were intent on capturing the coaches' voice in terms of the feasibility of MOGBA in their own MTP programs, we used a modified version of Bowen et al. (2009) feasibility framework to structure our focus of enquiry, as described in Table 2 below.

[Insert Table 2 here]

Interviews were conducted by the first author within three weeks of the end of MOGBA delivery and lasted approximately 45 - 60 minutes. Due to the widespread and remote nature of the cohort, a video-conferencing app (Zoom, 2020) was used to record the interviews. Participants were informed that their involvement would be anonymous throughout the study and signed informed consent was obtained from each participant prior to commencement. To protect their anonymity, participants were given a pseudonym during the reporting and discussion of the results. Ethical approval for the study was obtained from [Name of University] Research Ethics Committee (Ref: ER18592084) and participants' informed consent was obtained.

Data Analysis

All interviews were audio-recorded and transcribed verbatim by a third party. The final author then listened to the recordings of the interviews and scrutinised the transcripts in order to verify accuracy. Data management was facilitated using a standard word-processing package (Microsoft Word) and all transcripts were

deductively analysed (Patton, 1990) using a qualitative thematic framework (Braun & Clark, 2006) based on a modification of Bowen et al. (2009) feasibility framework. The interview transcripts were analysed by the first author using a process of selective coding, aligned to Bowen et al. (2009) dimensions of feasibility. Once the first author had completed this initial analysis, the authors met to reflexively consider (Braun & Clarke, 2020; Smith & McGannon, 2018) the themes and associated codes that the first author had provisionally constructed. Themes and codes were further explored in a way that allowed us to define, refine and name the themes (Braun & Clarke, 2020). This allowed for a rich, interpretative, dialogue so that the themes could be interrogated further and increased interpretive rigour (Korstjens & Moser, 2018).

Some codes were re-positioned within themes and we used Bowen et al.'s (2009) *areas of interest* and *sample outcomes* to further clarify and verify our placement of individual units of meaning. This clarification of themes and individual units allowed us to conduct axial coding (Rabinovich & Kacen, 2010) more accurately to avoid duplication and further substantiate areas of deep interest to the field of study. Philosophically, we do not claim that the themes that were constructed from the data are generalizable in a statistical sense, although we do believe that there is naturalistic generalisability in the way that coaches and coach educators could relate to tacit processes in their own lived experiences through the rich and meaningful accounts presented (Smith, 2017).

Findings

The seven themes constructed during data analysis were (1) Acceptability; (2) Demand; (3) Implementation; (4) Practicality; (5) Adaptation; (6) Integration; and (7) Expansion. These have been used to structure the Findings presented below. Findings

are represented through thick textual descriptions that engender honesty and transparency as hallmarks of quality in qualitative research (Tracy, 2010), whilst enhancing transferability (Mays & Pope, 2020). Here, we 'show' the data and invite readers to construct their own knowledge and explore the ways and extent to which these data resonate with them (Smith & McGannon, 2018), before we move onto the analytical 'tell' in the discussion.

Acceptability

Coach satisfaction with MOGBA was often related to the impact it was having on children within programs with Chris suggesting: "I've used them all [activity cards], the kids loved them… I think what is beneficial is it is a way for the kids moving right off the bat and that I can provide data that they are getting better… I love it. I love what you are trying to do" and Kayla "They even kept asking like 'when can we do more of those activities?' like, they thought it was cool". Other coaches were positive about MOGBA and accepted it more as they became familiar with it "I think it's awesome… once you get into it and start realizing and understanding what you're looking for… then it became a little bit easier for me". (David). Imogen said "I think it aligns with any coach who really wants to help their players just move more freely and with more confidence" with Suzie commenting on the generic nature of the resource:

> I like how it's not necessarily geared around a sport, so it's for any kid so regardless if they are athletic or have not participated in sports before, they have fun, they learn different types of movement and it just makes them more balanced.

Demand

Participants used some activities more than others. For example, T-Time was used predominantly as a warm-up activity, and was seen as valuable in the way that the challenge could be differentiated, as Denzel explains:

> the one [T-Time] where they start off on shuttle and they run a certain amount of metres or a space and they shift, to the left or to the right, the kids, the younger kids absolutely love that. Sometimes I might put a timer to them and say 'hey when you play T-Time you reacted in', the first time we did it, in 2 seconds but then the next time we played it, which was probably the next day because these kids really love it, that their times went down and they were trying to be better at it.

Sara further supports the notion of differentiation opportunities provided through T-time by increasing the challenge across age ranges:

> And you have the aspect to be able to improve the challenge, so year 3 did the triangle and they just stuck to the basics and then in year 4 they did the T with a little bit more of a challenge. So from just doing it with year four, we are gonna do it holding sticks now or you are gonna do the T, when you have done it you are gonna pass it to the person in front of you, things like that.

T-time became an activity in demand as a result of its simplicity, as Kayla points out: "Why T-Time? Ease in setting it up, I think ease in the space we are often, like I said, either in a smaller space, or a playground, or at a gymnasium and it didn't require as much equipment or explanation" and Imogen indicated that both coaches and children enjoyed the activity: "The T-Time drill, was definitely my favourite, they thought it was really, really, fun and so did we'.

Coaches reported that using the assessments within MOGBA provided them with information about a child's competence, as Suzie appreciates: "For the assessment, I think it's fantastic that it's based on stages of development and gives you areas of criteria, whilst David talks about the use of assessment in benchmarking and goal setting for his athletes:

> I think in MOGBA is that, you know, just giving them the, hey, this is this is what we want you to do. And this is what we want you to strive for, you know, if they are at the limitations and they're you know, they are not at the A level, you know, they're at the E level well by the end of the season let's try and get them up to at least the C level.

Implementation

A significant outcome from the findings is indication of the positive experience for children taking part in MOGBA. It seemed that the structure and format of the games allowed children to be assessed performing specific skills, in a 'natural' environment, whilst they were improving and having fun:

> I think kids would say, and I think Clinton would probably agree with this, is that they don't realise that they are being assessed because it's a game and they would tell you it's a game and which parts they liked but they would have no clue that you were looking at their movement and assessing them and you know taking notes on any of them. So, I liked that part. (Suzie)

Whilst some aspects of digital content supported the implementation of MOGBA, it was suggested that there was room to make the resource even easier to use:

> I feel like a video would be incredibly helpful in breaking down these activities. Not just the QR five second little snippet but just having a way to convey that information orally and visually would be super helpful with being able to then further explain the activity to other people as well. I would say like 5 minutes probably just enough to demonstrate the activity and really orally portray what the people who are assessing it are really trying to get at. (Rani)

Practicality

As is typical in many assessment environments, the size of the group and time required to conduct the assessment affected practitioners' ability to effectively assess children's CMS using MOGBA:

> I think the other thing we thought about as well was the sheer number of kids and I think some of those bigger games. It's an afterschool program and so, you know, a bigger game, I think we thought we would maybe struggle with capturing all the data in a setting like that. So, I think that we thought the T-Time we could contain it and we could really focus on, you know, is there a lot of body parts that you're tracking, and to try and do that with a larger game just felt like something that would have been a lot more challenging to take on. (Tahira)

Adaptation

Although the majority of coaches were positive about the use of MOGBA in their programs, particularly in relation to the use of visual stimulus other than text, in some cases the initial response was one of being overwhelmed. Adaptation was required by some of the coaches in how they used the resource to structure their

activities. This was occasionally made difficult by the complexity of the resource cards and the length of time it took to familiarize themselves with the information presented on the them, as two of the coaches explain:

> It took a second to decipher everything; there is just a lot coming at you all at once and its very kinda like layered and overlapping, which looks really cool, but also kinda took us a second again to work through (Imogen).

> Given the lack of time for people that are volunteering as coaches if it was something that could look a little bit less complex. Just more user friendly so like fewer words on the page, I think the diagrams were really helpful. I liked how it wasn't just reading and the explanation that it was visually appealing, I think was helpful. (Kai)

Integration

Coaches reflected upon the nature and purpose of their existing programs in relation to the integration of MOGBA and its sustainability for future use. For Caitlin, grading children was perceived at odds with the purpose of the existing program:

> I think for us it was hard because the kids that come to [name of program] they don't see it as something as like an extension of school for example they don't expect to get graded on it or evaluated they are just kind of there to have fun.

On the other hand, Sam recognised the value of MOGBA in using the assessment outcomes of MOGBA in his coaching practice:

> You kind of get an idea of where you need to spend a little bit more of your time and your resources to bring those players up with the others… having these sorts

> of things where you can assess the ability of everybody allows you to sort out, tailor some of those practices and tailor some of that stuff to make sure that everybody is improving.

Participants felt they would need to tailor the resource according to their existing organisational needs and that typically meant 'flavouring' the activity towards the sport they were currently delivering to integrate it effectively. Suzie suggested: "I think my first thoughts, and the thoughts turned out to be kinda correct, is that I would need to tailor them towards the sport that I was coaching". Imogen agreed with Suzie by pointing out: "We never really were setting aside or losing anything by doing the MOGBA practices because of the way that we kinda tailored them towards soccer to kind of pre-emptively negate some of that attitude. Sam suggested he was trying to "for lack of better word, to sneak it in I wanted them to do it without really realising what it was for". It seems Sam was searching for an authentic means of assessment, when he reported "I was trying to get it as a more natural assessment I guess and incorporate it into where it's still a benefit to the soccer practice, where they were actually gaining something from it that is going to be pertinent on the soccer team".

Expansion

Some participants suggested there were farther reaching positive consequences of using MOGBA in the way that it revealed the ability of certain children not previously witnessed:

> The endzone drill was another great one, you know, we found out who our really strong throwers were and some of them were the smallest players on our team that we had avoided using in games for that specific purpose… We didn't think

> that it was our best move, and it absolutely should have been, so we changed kind of the positions on the field based on the results that we saw. (Imogen)

> My hope would be to use the MOGBA to allow those children who may not see that they are a good sports person actually have the movement skills that are quite refined to stand out amongst a crowd of some children who are skilled across the board. (Sian)

Discussion

Most participants spoke favourably about the resource and appreciated the visually appealing aspect of the design, particularly the use of technology such as QR codes, with recommendations for future enhancement of this area. This finding is welcomed as previous reviews have questioned the efficacy of technology in coaching (Denzin & Lincoln, 2005) and the longitudinal tracking of such usage would be an area for future research in order to understand its potential impact on optimising coach development pedagogies.

Coaches suggested that coaching involved both pedagogy and assessment when using MOGBA within their programs. Pedagogy entailed the coach establishing activities and then differentiating the opportunities for children based on their responses. Children's performance of designated movement skills was assessed during the activity and results were used for accountability purposes to benchmark the children as a cohort in general to perhaps compare with other benchmarking data. What was less clear was the role or function that assessment played in subsequent planning or coaching in terms of the way that previous assessment guided subsequent intervention,

as part of an inter-related message system of curriculum, pedagogy and assessment (Cushion & Townsend, 2019). Hay and colleagues (2012) suggest there is limited evidence of the potential contribution of assessment to the recognition and promotion of learning in the sports coaching space. MOGBA, as a curriculum, has an emphasis on concurrent pedagogy and assessment to encourage the coaches to view the two systems as synchronous. Coach responses in this study highlighted how MOGBA assessments allowed coaches to focus on a particular movement area, with coaches acting upon that information to enhance the learning of the child. Information was occasionally used to raise the child's awareness of their movement competence or to guide differentiation of the activity to make it more or less challenging.

When coaches tried to integrate assessment into their MOGBA sessions, they suggested adherence to the proposed assessment matrix was affected by the complexity of the assessment task. Furthermore, as no guidance was provided related to the number of children to be assessed or the frequency of assessment over the intervention period, questions remained as to the effectiveness of assessment in a MOGBA environment. These constraints have been postulated as dilemmas in previous developments of movement assessment frameworks (Lander et al., 2016; Morley, Van Rossum, Richardson, & Foweather, 2019; Tyler et al., 2018) and remain perennial issues in environments involving large numbers of children.

Given that the vast majority of participation and performance athlete development models purport to the inclusion of a movement-based foundation leading to sport specific skills (Côté & Vierimaa, 2014; Lloyd & Oliver, 2012) it is a surprise to find that participants were trying to 'sneak' this approach into their programs. There was a sense that the coach ideologically understood the need for MOGBA, but was

perhaps bound by sport-specific, skill-based approaches and, therefore, compartmentalised modes of providing sporting experiences for children as opposed to more contemporary perspectives of ecological dynamics (Ng & Button, 2018). The use of 'flavouring' by coaches in the way that coaches adapted MOGBA to suit their existing sport delivery does suggest that coaches were cognisant of the need to move from FMS to CMS in the way that they introduced notions of movement competence into a sport-specific situation. However, questions remain as to whether this was delivered intentionally as part of a broader developmental notion of athlete support or simply to appease the requirements of the individual sport being delivered within the existing programme.

Perhaps the most revealing aspect of the feasibility trial was participants' suggestions of the way that MOGBA revealed ability in different ways than they had previously experienced. Whilst coaches within different programs will have differing views with regards to their role in developing athlete potential, it was clear from some participants that MOGBA allowed them to look at their participants through a different lens. Occasionally, this led to the reduced impact of biological maturational status that is known to produce bias in coach's perceptions of athlete development and role positioning (Cripps, Hopper, & Joyce, 2016; Towlson et al., 2017). In some cases, this led the coach to adopt a more athlete-centred mindset, recognising that the athlete had capabilities that went beyond those emanating from previous evidence within their programs and highlighting the need for a non-linear approach to game design and development (Atencio, Clara & Miriam, 2014).

Practical implications

Based upon the coaches' perceptions captured within the context of this study, there are a number of practical implications. Coaches felt overwhelmed by the resource, so it is important that future resource development limits the amount of information presented to a coach when explaining the establishment of an activity. Assessment criteria need to be concise to provide a feasible platform for movement assessment. Potential solutions to reduce the need for onerous criteria-referenced assessment have been explored in the use of digital technology (Ng, Button, Collins, Giblin & Kennedy, 2019; van Rossum & Morley, 2018) and coaches could benefit from the integration of such solutions in future iterations of assessment frameworks.

Coaches used MOGBA with very limited formal professional development and developed their understanding of the feasibility of the resource through implementation and reflection. As a result of the valuable insights this study has produced where researchers have worked closely with coaches as key stakeholders, as a form of integrative knowledge transfer (Gagliardi, Berta, Kothari, Boyko & Urquhart, 2015), feasibility studies are recommended as a mainstay of future resource and program development for coaches. These insights, if used effectively in future iterations of MOGBA, have the potential to significantly increase the usefulness of the resource to coaches using it in the future. As context is such a significant factor in these findings, it would be interesting to further explore these notions using a critical realist framework to understand what works for whom and in what context (North, 2017; Wiltshire, 2018).

Limitations

Several limitations of the study need to be acknowledged. This study was limited to some extent by the lack of fidelity measures employed related to the frequency and

depth of use of the resource by coaches across the trial. However, allowing participants to select which activities were most suitable for their own programmes with the minimal level of formal support provided an ecologically framed perspective of the feasibility of MOGBA. Further studies designed to explore the effectiveness of MOGBA would need to monitor the (a) frequency, (b) selection, (c) duration and (d) assessment of activities to appreciate the nuances of use. It was also difficult to triangulate the coaches' perceptions with their actual usage of MOGBA, thus a mixed methods approach to future research, including coach observation and athlete perceptions, would be appropriate. Our sample size was small, and we had limited understanding of the coach development experiences of participants. We used a limited number of MOGBA activities and had a nine-week intervention period; all of which limited our understanding of the full scale of potential impact of MOGBA and presents some limitations related to scalability in the future. Whilst aspects of face and content validity were achieved through reference to existing movement development theory and the use of experts within the field, reliability was not assessed and will need to be addressed in future studies.

Conclusions

Findings suggested that MOGBA was feasible in the ways that it was accepted and implemented, although enhancements are needed to ensure it becomes even more practical to use. The use of assessment, as an integrated element of delivery, needs further support and development and logistical issues need resolving for the assessment to become more feasible. MOGBA was very much in demand, predominantly for the movement development component and highlighted the need for authentic, dynamic

assessment tasks focussed on the performer's ability to respond to changing environmental demands through the use of movement adaptability. MOGBA also proved useful in providing coaches with a more expansive view of the broader capabilities of children in their programmes, by providing a movement competence lens for the coaches to look through. Given the limited training and support input for coaches provided within this feasibility trial, so often seen to accompany coach professional development (Cushion et al., 2010), it would be reasonable to suggest that a more comprehensive programme of professional development would yield even better levels of feasibility of the use of MOGBA by coaches within the MTP programme.

References

Adolph, K.E., Karasik, L.B., & Tamis-LeMonda, C.S. Motor skills. In O. Marc & T. Bornstein (eds.), *Handbook of cross-cultural developmental science* (pp. 61–88). New York, NY: Taylor & Francis.

Atencio, M., Yi, C. J., Clara, T. W. K., & Miriam, L. C. Y. (2014). Using a complex and nonlinear pedagogical approach to design practical primary physical education lessons. *European physical education review*, *20*(2), 244-263. doi:10.1177/1356336X14524853

Bailey, R., & Morley, D. (2006). Towards a model of talent development in physical education. Sport, education and society, 11(3), 211-230. doi: 10.1080/13573320600813366

Balyi, I., & Williams, C. A. (2009). *Coaching the young developing performer: tracking physical growth and development to inform coaching programmes*. Leeds, UK: Coachwise 1st4sport.

Bardid, F., Vannozzi, G., Logan, S. W., Hardy, L. L., & Barnett, L. M. (2019). A hitchhiker's guide to assessing young people's motor competence: Deciding

what method to use. *Journal of science and medicine in sport*, *22*(3), 311-318. doi: 10.1016/j.jsams.2018.08.007

Bartenieff, I., & Lewis, D. (1980). *Body movement: Coping with the environment*. London, UK: Psychology Press.

Behan, S., Belton, S., Peers, C., O'Connor, N. E., & Issartel, J. (2019). Moving Well-Being Well: Investigating the maturation of fundamental movement skill proficiency across sex in Irish children aged five to twelve. *Journal of sports sciences*, 37(22), 2604-2612. doi: 10.1080/02640414.2019.1651144

Boland, L., Kothari, A., McCutcheon, C., & Graham, I. D. (2020). Building an integrated knowledge translation (IKT) evidence base: colloquium proceedings and research direction. *Health research policy and systems*, *18*(1), 8. doi: 10.1186/s12961-019-0521-3

Bowen, D. J., Kreuter, M., Spring, B., Cofta-Woerpel, L., Linnan, L., Weiner, D., & Fernandez, M. (2009). How we design feasibility studies. *American journal of preventive medicine*, *36*(5), 452-457. doi: 10.1016/j.amepre.2009.02.002

Bowes, I., & Jones, R. L. (2006). Working at the edge of chaos: Understanding coaching as a complex, interpersonal system. *The sport psychologist*, *20*(2), 235-245. doi: 10.1123/tsp.20.2.235

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101. doi: 10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2020). One size fits all? What counts as quality practice in (reflexive) thematic analysis?. *Qualitative Research in Psychology*, 1-25. Doi: 10.1080/14780887.2020.1769238

Bryman A (2015). *Social research methods (5th Ed.)*. Oxford, UK: Oxford University Press.

Burton, A. W., & Miller, D. E. (1998). *Movement skill assessment*. Human Kinetics.

Coaching Association of Canada. (2020). https://coach.ca/nccp-fundamental-movement-skills

Côté, J., & Gilbert, W. (2009). An integrative definition of coaching effectiveness and expertise. *International journal of sports science & coaching*, *4*(3), 307-323. doi: 10.1260/174795409789623892

Côté, J., & Vierimaa, M. (2014). The developmental model of sport participation: 15 years after its first conceptualization. *Science & sports*, *29*, S63-S69. doi: 10.1016/j.scispo.2014.08.133

Cripps, A. J., Hopper, L. S., & Joyce, C. (2016). Coaches' perceptions of long-term potential are biased by maturational variation. *International journal of sports science & coaching*, *11*(4), 478-481. doi: 10.1177/1747954116655054

Cushion, C. J., & Townsend, R. C. (2019). Technology-enhanced learning in coaching: A review of literature. *Educational review*, 71(5), 631-649. doi: 10.1080/00131911.2018.1457010

Cushion, C. J., Armour, K. M., & Jones, R. L. (2006). Locating the coaching process in practice: models 'for' and 'of' coaching. *Physical education and sport pedagogy*, 11(01), 83-99. doi: 10.1080/17408980500466995

Cushion, C., Nelson, L., Armour, K., Lyle, J., Jones, R., Sandford, R., & O'Callaghan, C. (2010). *Coach learning and development: A review of literature*. Leeds, UK: sports coach UK.

Denzin, N.K., & Lincoln, Y.S. (2005). Introduction: The Discipline and Practice of Qualitative Research. In N.K. Denzin, Y.S. Lincoln (eds.), *The Sage handbook of qualitative research* (pp. 1–32). London, UK: Sage.

Dieffenbach, K. (2019). Frameworks for Coach Education and Development. In K. Dieffenbach, & M. Thompson (eds.), *Coach education essentials* (pp. 3-16). Champaign, IL: Human Kinetics.

Dudley, D. A. (2015). A conceptual model of observed physical literacy. *The physical educator*, *72*(5). doi: 10.18666/TPE-2015-V72-I5-6020

Folio, M.R. and Fewell, R.R. (2000) *Peabody Developmental Motor Scales. Examiners manual*. Pro-ED. Inc., Austin-Texas.

Gagliardi, A. R., Berta, W., Kothari, A., Boyko, J., & Urquhart, R. (2015). Integrated knowledge translation (IKT) in health care: a scoping review. Implementation science, 11(1), 38. doi: 10.1186/s13012-016-0399-1

Gardner, J. (2012). *Assessment and learning 2nd Edition*. London, UK: Sage.

Giblin, S., Collins, D., & Button, C. (2014). Physical literacy: importance, assessment and future directions. *Sports medicine*, *44*(9), 1177-1184. doi: 10.1007/s40279-014-0205-7

Goodway, J. D., Ozmun, J. C., & Gallahue, D. L. (2019). *Understanding motor development: Infants, children, adolescents, adults*. Jones & Bartlett Learning.

Graham, C., Holt-Hale, S. A., & Parker, M. (2013). *Children moving: A reflective approach to teaching physical education, 9th edition.* New York, NY: McGraw-Hill.

Haga, M., Pedersen, A. V., & Sigmundsson, H. (2008). Interrelationship among selected measures of motor skills. *Child: care, health and development*, *34*(2), 245-248. doi: 10.1111/j.1365-2214.2007.00793.x

Hay, P., & Penney, D. (2009). Proposing conditions for assessment efficacy in physical education. *European physical education review*, *15*(3), 389-405. doi: 10.1177/1356336X09364294

Hay, P., Dickens, S., Crudgington, B., & Engstrom, C. (2012). Exploring the potential of assessment efficacy in sports coaching. *International journal of sports science & coaching*, *7*(2), 187-198. doi: 10.1260/1747-9541.7.2.187

Henderson, S.E., Sugden, D.A. and Barnett, A.L. (2007) *Movement Assessment Battery for children – 2 Examiner's Manual*. Harcourt Assessment, London.

Holt, N.L. (2008). *Positive youth development through sport*. New York, NY: Routledge.

Hulteen, R. M., Morgan, P. J., Barnett, L. M., Stodden, D. F., & Lubans, D. R. (2018). Development of foundational movement skills: A conceptual model for physical activity across the lifespan. *Sports medicine*, *48*(7), 1533-1540. doi: 10.1007/s40279-018-0892-6

Jones, R. L., Armour, K. M., & Potrac, P. (2002). Understanding the coaching process: A framework for social analysis. *Quest*, *54*(1), 34-48. doi: 10.1080/00336297.2002.10491765

Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European journal of general practice*, *24*(1), 120-124. doi: 10.1080/13814788.2017.1375092

Lander, N., Morgan, P. J., Salmon, J., & Barnett, L. M. (2016). Teachers' perceptions of a fundamental movement skill (FMS) assessment battery in a school setting. *Measurement in physical education and exercise science*, *20*(1), 50-62. doi: 10.1080/1091367X.2015.1095758

Lara-Bercial, S., North, J., Petrovic, L., Oltmanns, K., Minkhorst, J., Hämäläinen, K., & Livingstone, K. (2017). *European sport coaching framework v1*. Champaign, IL: Human Kinetics.

Lubans, D. R., Morgan, P. J., Cliff, D. P., Barnett, L. M., & Okely, A. D. (2012). Fundamental movement skills in children and adolescents. *Sports medicine*, *40*(12), 1019-1035.

Denzin, N. K., Lincoln, Y. S., & Guba, E. G. (2005). Paradigmatic controversies, contradictions, and emerging confluences (pp.163-188). *The sage handbook of qualitative research*. Thousand Oaks, CA: Sage Publications.

Lloyd, R. S., & Oliver, J. L. (2012). The youth physical development model: A new approach to long-term athletic development. *Strength & conditioning journal*, *34*(3), 61-72. doi: 10.1519/SSC.0b013e31825760ea

Mays, N., & Pope, C. (2020). Quality in qualitative research. *Qualitative research in health care*, 211-233. doi:10.1002/9781119410867.ch15

Morgan, P. J., Barnett, L. M., Cliff, D. P., Okely, A. D., Scott, H. A., Cohen, K. E., & Lubans, D. R. (2013). Fundamental movement skill interventions in youth: a systematic review and meta-analysis. *Pediatrics*, *132*(5), e1361-e1383. doi: 10.1542/peds.2013-1167

Morley, D., Till, K., Ogilvie, P., & Turner, G. (2015). Influences of gender and socioeconomic status on the motor proficiency of children in the UK. *Human movement science*, *44*, 150-156. doi: 10.1016/j.humov.2015.08.022

Morley D & van Rossum T. (2019) Development of a Movement Oriented Games Based Assessment (MOGBA) resource for 8-12 year old children within Nike's 'Made to Play' portfolio. UK and USA testing. Researchgate project. https://www.researchgate.net/project/Developing-a-Movement-Oriented-Games-Based-Assessment-MOGBA-for-8-12-year-olds-on-programs-within-Nikes-Made-to-Play-initiative

Morley, D., van Rossum, T., Richardson, D., & Foweather, L. (2019). Expert recommendations for the design of a children's movement competence assessment tool for use by primary school teachers. *European physical education review*, *25*(2), 524-543. doi: 10.1177/1356336X17751358

Mehendale, D., Masurekar, R., Nemade, S., & Shivthare, S. (2017). To study the use of QR code in the classroom to enhance motivation, communication, collaboration and critical thinking. *International journal of innovative research in computer and communication engineering*, 5(4), 6987-6993. doi: 10.15680/IJIRCCE.2017. 0504061

Newton, P. E. (2007). Clarifying the purposes of educational assessment. *Assessment in education*, 14(2), 149-170. doi: 10.1080/09695940701478321

Ng, J. L., & Button, C. (2018). Reconsidering the fundamental movement skills construct: Implications for assessment. *Movement sport sciences*, (4), 19-29. doi: 10.1051/SM/2018025

Ng, J. L., Button, C., Collins, D., Giblin, S., & Kennedy, G. (2019). Assessing the Internal Reliability and Construct Validity of the General Movement Competence Assessment for Children. *Journal of motor learning and development*, 1(aop), 1-20. doi: 10.1123/jmld.2018-0047

Nike. (2020) Made to Play. Community Impact. https://communityimpact.nike.com/made-to-play

North, J. (2017). *Sport coaching research and practice: Ontology, interdisciplinarity and critical realism*. Oxford, UK: Taylor & Francis.

Patton, M. Q. (1990). *Qualitative evaluation and research methods*. London, UK: Sage Publications.

Rabinovich, M., & Kacen, L. (2010). Advanced relationships between categories analysis as a qualitative research tool. *Journal of clinical psychology*, 66(7), 698-708. doi: 10.1002/jclp.20693

Robinson, L. E., & Goodway, J. D. (2009). Instructional climates in preschool children who are at-risk. Part I: Object-control skill development. *Research quarterly for exercise and sport*, 80(3), 533-542. doi: 10.1080/02701367.2009.10599591

Seifert, L., Button, C., & Davids, K. (2013). Key properties of expert movement systems in sport. *Sports medicine*, 43(3), 167-178. doi: 10.1007/s40279-012-0011-z

Smith, B. (2018). Generalizability in qualitative research: Misunderstandings, opportunities and recommendations for the sport and exercise sciences. *Qualitative research in sport, exercise and health*, 10(1), 137-149. doi: 10.1080/2159676X.2017.1393221

Smith, B., & McGannon, K. R. (2018). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International review of sport and exercise psychology*, 11(1), 101-121. doi: 10.1080/1750984X.2017.1317357

Sparkes A and Smith B (2014) *Qualitative research methods in sport, exercise and health: From process to product*. Abingdon, UK: Routledge.

Towlson, C., Cobley, S., Midgley, A. W., Garrett, A., Parkin, G., & Lovell, R. (2017). Relative age, maturation and physical biases on position allocation in elite-youth soccer. *International journal of sports medicine*, *38*(03), 201-209. doi: 10.1055/s-0042-119029

Tracy SJ (2010) Qualitative Quality: Eight "Big-Tent" Criteria for Excellent Qualitative research. *Qualitative inquiry*, 16(10), 837–851. doi: 10.1177/1077800410383121

Travassos, B., Araújo, D., Duarte, R., & McGarry, T. (2012). Spatiotemporal coordination behaviors in futsal (indoor football) are guided by informational game constraints. *Human movement science*, 31(4), 932-945. doi:10.1016/j.humov.2011.10.004

Tyler, R., Foweather, L., Mackintosh, K. A., & Stratton, G. (2018). A dynamic assessment of children's physical competence: The dragon challenge. *Medicine and science in sports and exercise*, *50*(12), 2474. doi: 10.1249/MSS.0000000000001739

Ulrich, D.A. (2000) *Test of Gross Motor Development, 2nd ed. Examiner's manual*. Pro-ED. Inc., Austin, Texas.

UK Coaching. (2020). How to coach the fundamentals of coaching. https://www.ukcoaching.org/courses/workshops/how-to-coach-the-fundamentals-of-movement

van Rossum, T., Foweather, L., Richardson, D., Hayes, S. J., & Morley, D. (2018). Primary Teachers' Recommendations for the Development of a Teacher-

Oriented Movement Assessment Tool for 4–7 Years Children. *Measurement in physical education and exercise science*. doi: 10.1080/1091367X.2018.1552587

van Rossum, T., & Morley, D. (2018). The role of digital technology in the assessment of children's movement competence during Primary school Physical Education lessons. In J. Koekek, & I. van Hilvoorder (Eds.), *Digital technology in physical education: Global perspectives* (pp. 45-66). London, UK: Routledge.

Weiss, M. R. (2008). 2007 CH McCloy Lecture: "Field of Dreams:" Sport as a Context for Youth Development. *Research quarterly for exercise and sport*, *79*(4), 434-449. doi: 10.1080/02701367.2008.10599510

Wick, K., Leeger-Aschmann, C. S., Monn, N. D., Radtke, T., Ott, L. V., Rebholz, C. E., & Munsch, S. (2017). Interventions to promote fundamental movement skills in childcare and kindergarten: a systematic review and meta-analysis. *Sports medicine*, *47*(10), 2045-2068. doi: 10.1007/s40279-017-0723-1

Williams, A. M., & Ford, P. R. (2008). Expertise and expert performance in sport. *International review of sport and exercise psychology*, *1*(1), 4-18. doi: 10.1371/journal.pone.0034731

Wiltshire, G. (2018). A case for critical realism in the pursuit of interdisciplinarity and impact. *Qualitative research in sport, exercise and health,* 10(5), 525-542. doi: 10.1080/2159676X.2018.1467482

Zoom Video-conferencing app. (2020). Zoom. https://zoom.us/

Tables

Table 1. Participants, length of service in role and contextual information

Participant	Length of service in role	Contextual information

Suzie	5 years	Previously elementary school PE teacher for 10 years, also worked in education and training
Clinton	3 years	Currently an elementary school PE teacher. Expertise in functional movement and S&C at collegiate level
Denzel	12 years	Elementary school health and wellness teacher.
David	10 years	Experienced in coaching children's soccer. Coaching Special Olympics teams.
Imogen	1 year	Coached wide variety of sports, typically 11-12 years, for over 5 years
Sian	5 years	Senior leader in school; PE coordinator in charge of after-school support and school games.
Kayla	4 years	Coaches three male teams at U6-U9 level. Involved in varsity athlete development.
Sara	13 years	Programme lead
Tahira	3 years	Programme liaison officer. Coached primarily at professional and Olympic level (track and field, NFL players and women's soccer players)
Sam	6 years	Soccer coach working with a range of female teams, predominantly U9-U13
Rani	First year intern	Master's in social work and Public Health
Caitlin	First year	Outreach coordinator, programme data management.
Kai	4 years	Athlete liaison coordinator.

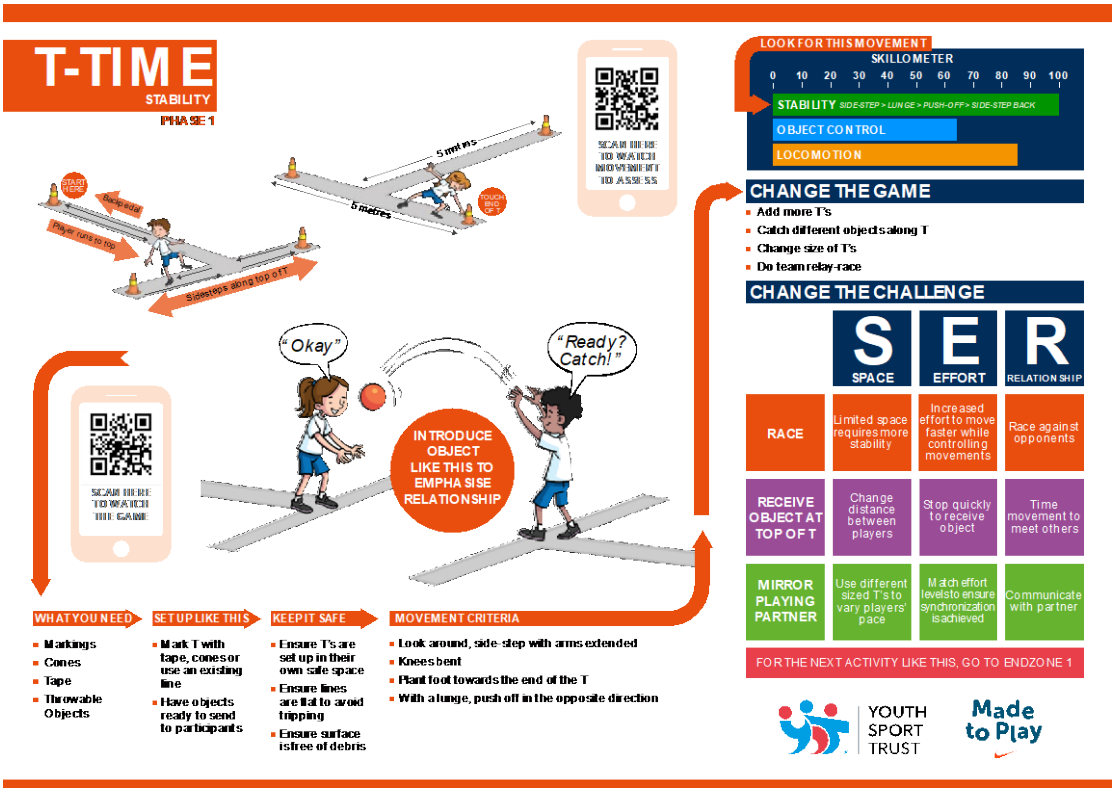
Table 2. Description of the modified version of the feasibility framework (adapted from Bowen et al. 2009)

Dimension	Area of interest	Sample outcome
Acceptability	Examines how participants react to the program	Satisfaction, intent to continue use, fit within organisation
Demand	Documents the frequency of use or estimated use of the program	Actual use, intention to use, perceived demand
Implementation	Focuses on the extent and manner in which the program can be implemented as planned	Degree of execution, success or failure of execution, factors affecting execution
Practicality	Explores the extent that the program can be delivered when resources, time and/or commitment is constrained in some way	Positive/negative effects on target participants, ability of participants to execute the program
Adaptation	Focuses on changing the program content or procedures to be appropriate in a new infrastructure	Degree to which similar outcomes are obtained in new format

Integration	Assesses the level of system change needed to integrate the program into existing infrastructure	Perceived fit within infrastructure, perceived sustainability
Expansion	The potential success of an already-successful intervention with a different population or in a different setting	Fit with organizational goals and culture Positive or negative effects on organization Disruption due to expansion component

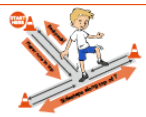
Figures

Fig 1. Example of a Movement-oriented Games Based Assessment (MOGBA) activity card.



T-TIME
STABILITY
PHASE 1

SIDE-STEP
> LUNGE
> PUSH-OFF
> SIDE-STEP BACK



SCAN HERE TO CHECK MOVEMENT TO ASSESS

STAGE OF DEVELOPMENT	CHANGING DIRECTION		
	E EMERGING	C 'CAN DO'	A ACCOMPLISHED
	ASSESSMENT CRITERIA		
HEAD	• Mainly looking down	• Aware of position but sometimes looks down	• Always looking up, ready for object, despite changes of direction
ARMS	• Limited movement, arms mainly by sides	• Arms aiding balance, in ready position	• Arms always in ready position to catch and move
LEGS	• Only part of foot planted, feet mainly cross	• Feet occasionally cross, little spring in movement	• Knees always bent, push off on whole foot
BODY	• Body appears stiff, sometimes off balance	• Leaning forward to balance body and aid fluency, moves better off one side than the other	• Always leaning forward, fluid and performs equally well in both directions

OBSERVATION AND ASSESSMENT OF SOL
INSERT E, C OR A

NAME	HEAD	ARMS	LEGS	BODY
Ewan	C	A	E	A

YOUTH SPORT TRUST

Made to Play