# Identifying best practice in sports coaching for athletes with intellectual disabilities - Coach and Athlete perspectives.

**Prof Jan Burns, Canterbury Christ Church University**

**Matthew Johnson, Canterbury Christ Church University**

## Summary

This report presents the findings of an interview study with athletes with intellectual disabilities (ID) and coaches working with this population. Little is known about where coaches gain their information and experience to work with this group and what athletes find most helpful. Athletes and coaches were asked in a semi-structured interview about their experiences, what practices they found most helpful, and unhelpful, and what advice they would give to others in their position. The views of the athletes and coaches were consistent, but the results showed that coaches are mostly reliant on self-learning and learning from other coaches working in the area. Both the athletes and coaches had a lot to say about good practice. Five recommendations are made from these results about how to improve coaching for athletes with ID.

**Identifying best practice in sports coaching for athletes with intellectual disabilities - Coach and Athlete perspectives.**

## Introduction

Research has shown that many young people with intellectual disabilities across the EU find it difficult to access sport, have fewer opportunities for participation and have a limited opportunity to excel in a given sport (European Commission, 2007). On this basis, this study forms a part of Work Package 2b of the EU Erasmus+ funded IDEAL Project (Intellectual Disability, and Equal opportunities for Active and Long-term participation in sport www.idealproject.org/). The aim of the IDEAL project is to address the inequalities seen across the EU in the provision of sport for individuals with intellectual impairments, by increasing the quality of sport interventions and sporting organisations, and empowering people with intellectual disabilities to improve their physical and mental health.  Work Package 2b relates to the status of coaching for athletes with intellectual disabilities, and this report details both athlete's and coach's perspectives on the coaching resources they have available to them.

*Benefits of sports coaching*
Martin & Whalen, (2014) highlighted the benefits of receiving good quality coaching to athletes, including increases in satisfaction, motivation and cohesion, alongside increasing performance through reduction of anxiety and increases in confidence. In an extensive review of this area Boardley, (2018), concluded that the evidence between coaching efficacy and competitive outcomes was robust and in terms of the coach-athletes relationship a negative coaching relationship can hinder performance in the same way that good quality coaching can enhance performance. Furthermore, Kassim and Boardley, (2018) demonstrated that athlete's perceptions of their coaches were related to how the athlete experienced their sport for both team and individual sports, and this endured across divergent cultures. In terms of both performance outcomes and the subjective experience of the athlete the role of the coach is a proven important influencing factor.

*Disability sports coaching research*
Following the introduction of the European Commission White Paper on Sport (European Commission, 2007), there has been an increase in research into disability, sport and physical activity (Smith & Sparkes, 2012). Despite this, research into coaching in disability sport still appears to be underrepresented in the literature. Shapiro and Pitts, (2014) reviewed 5443 sports management research articles between 2002 and 2012 and found only 89 articles related to disability sport, with 0 articles primarily focusing on coaching disability sport. The shortage of research in this area could indicate a lack of available and appropriate coaching methods for athletes with disabilities. This lack of support can lead to negative effects for the athletes such as inconsistent or over training, non-specific training, failure to taper prior to competition or failure to rest following competition and inappropriate nutrition (Martin &

Whalen, 2014). However, it is important to note that more recently, the disability sports coaching literature has begun to grow, particularly in relation to coaching elite athletes within the context of parasports, but also including more grass roots development as the inclusion agenda has become more prominent (Clark & Woodson-Smith, 2018). Nevertheless, Dehghansai, Lemez, Wattie, and Baker, (2017) in their recent review of the what influences the development of athletes with disabilities was critical of the literature for its remaining paucity, its short-term nature, concentration on Paralympic sports and groups, and lack of specificity in relation to the needs of specific groups and their engagement in specific sports. They conclude that:

> *'Developing a better understanding of the coach's role in training and the interpersonal relationship between coaches and athletes with a disability is paramount to producing appropriate guidelines and recommendations for athletes with a disability and coaches to optimize practice and training.' (p87)*

Townsend, Smith, and Cushion, (2015) have also been critical of the existing research both for the lack of attention to this area and for not considering disability sports coaching within the context of models of disability. In their critical review Townsend et al (2015) conclude that integrating models of disability into coach education will lead to:

> *'…..understanding why and how individuals and groups become excluded and oppressed, coaches are able to reflect on their practices to uncover and deconstruct some of their deeply held assumptions about coaching disabled athletes.' p93*

Smith and Bundon (2018) further expand this challenge to suggest that how we explain and understand disability in relation to sport will move our perceptions of the disabled life as a 'dire existence that only the most courageous can 'overcome'' to one of a 'celebration of individual courage, heroism and battling back warriors'(p29). They conclude that to be effective in this area we need to be 'equally committed to engaging with the topic of disability as we are to studying sport' p30.

*Research into ID sports coaching*
It is worth noting that the studies mentioned above did not specifically target coaching of athletes with intellectual disabilities, but rather disability coaching in general. In the few studies which have focused explicitly on coaching for athletes with ID, (Wareham, Burkett, Innes, & Lovell, 2017) discussed the prominence of negative preconceptions held by coaches prior to coaching athletes with ID along with potential challenges that new coaches such as practical issues, forms of adaptation and the influence of psychosocial issues e.g. stigma and inequality. (MacDonald, Beck, Erickson, & Côté, 2016) investigated the sources of knowledge for coaches of Special Olympic

athletes and concluded that they primarily learnt by doing and through interacting with other coaches. This study did not address the methods that coaches had learnt to best employ, but rather how they had gained their knowledge. However, there has been one text book published in this area, Hassan, Dowling, and McConkey, (2014) which provides some interesting and helpful examples of projects, but they primarily focus on the Special Olympics, and do not include more competitive contexts. Likewise, the only available text on autism and sport by Patterson and Smith, (2012) is aimed at a wide audience including families, coaches, clinicians and those developing adapted sports programmes, and comes from a disability rather than sport background. Again, it provides some helpful information about the benefits of sport for children with autism and some practical advice about adaptations to make in specific sports, but does not particularly focus upon the coach athlete relationship. These two books also illustrate a dichotomy that appears in the literature with sources either coming primarily from a disability context and considering sport, or primarily from a sporting background and then consider disability in terms of adaptations. Equal integration of 'disability' and 'sport' is a difficult balance to achieve, but perhaps should remain an ambition.

*Aims*

This review of the literature highlights the limited amount of available information regarding best coaching practices for athletes with ID. To our knowledge, there are currently no research studies identifying the most appropriate coaching practices to implement while coaching athletes with ID and what the educational needs of coaches working in this area are.

This study intended to highlight the current practices or methods employed in coaching sports to athletes with intellectual disabilities, gained through one-to-one interviews from the perspective of the coach and the athlete. The athlete interviews aimed to uncover information regarding the athletes support network, the type of coaching that athletes found helpful or disliked, and what advice they would give to other athletes receiving coaching. The coach interviews aimed to reveal further information regarding ID coaches' primary sources of coaching knowledge, along with information regarding the key coaching challenges that they faced while coaching athletes with ID, the methods that could be utilised to address these challenges, and finally their advice to other coaches in this context. The aim was to combine both data sets to obtain a full picture of some of the most effective practices that are currently implemented. The end goal was to provide information and advice gained from experienced coaches that could be applied in real world coaching situations or used to further inform coach education in this area.

**Methods**

*Participants*

**Identifying best practice in sports coaching for athletes with intellectual disabilities - Coach and Athlete perspectives.**

All participants were required to be at least 18 years old. Coaches were required to verbally confirm a minimum of one years' experience in coaching athletes with ID, either currently or previously. Athletes were required to have been actively competing in their sport for a minimum period of 6 months and have had experience working with a coach throughout this duration. For this study, 'actively competing' was defined as participating in their sport consistently on a weekly basis, and taking part in organised events as a competitor. Determination of intellectual disability was made through the athlete's membership to a relevant sporting organisations such as the Special Olympics or Virus: World Intellectual Impairment Sport (previously, INAS: International Sports Federation for Persons with Intellectual Disability) and/or their inclusion in other services for people with Intellectual Disability. Clinical determination of the diagnosis of ID was not carried out to determine eligibility as this was deemed unnecessary for the scope of the study.

Recruitment of coaches occurred through existing networks, through internet searches, distribution of advertisements, through recommendations by other IDEAL project partners, or through recommendations by participants within the study. Coaches were initially contacted through email and were provided with an information sheet and consent form to sign and return.

Recruitment of athletes occurred primarily through permitted attendance at a Great Britain Special Olympic team training weekend in Sheffield, England. Other athletes were recruited through advertisements in INAS newsletters and through recommendations by IDEAL partners on the project. Athlete's were approached in person alongside their coaches and were provided with paper-based copies of information sheets and consent forms to sign.

In total, 25 participants took part in the study and their characteristics are shown in Table 1.

Table1.
*Participants characteristics*

| Variable | | Coaches (N=12) | Athletes (N=13) |
|---|---|---|---|
| Gender | Male | 8 | 8 |
| | Female | 4 | 5 |
| Nationality | Great Britain | 6 | 13 |
| | France | 1 | 0 |
| | Iceland | 1 | 0 |
| | Ireland | 1 | 0 |
| | Sweden | 1 | 0 |
| | Spain | 1 | 0 |

**Identifying best practice in sports coaching for athletes with intellectual disabilities - Coach and Athlete perspectives.**

| | Poland | 1 | 0 |
|---|---|---|---|
| Age | Range | 22-72 | 18-42 |
| | Mean | 49 | 24 |
| Mean length of involvement (years) | In coaching/sport | 24 | 12 |
| | In coaching ID | 12 | / |
| Level of competition | Elite | 5 | 0 |
| | Special Olympics | 3 | 10 |
| | Both | 2 | 3 |
| | Local | 2 | 0 |
| Sports | Athletics | 6 | 1 |
| | Swimming | 3 | 1 |
| | Team Sports | 5 | 2 (basketball) |
| | Tennis | 1 | 0 |
| | Equestrian | 1 | 1 |
| | Nordic Ski | 1 | 0 |
| | Gymnastics | 0 | 1 |
| | Cycling | 0 | 5 |
| | Judo | 0 | 1 |
| | Golf | 0 | 1 |
| | Table Tennis | 0 | 1 |

*Interviews*
An interview schedule applicable to coaches of athletes with ID was developed consisting of an introductory paragraph outlining the aim of the study and a series of interview questions divided into two parts. Part 1 consisted of demographic questions and questions surrounding the coaches involvement in coaching. Part 2 consisted of questions surrounding the interviewee's personal experience of coaching athletes with ID.

A similar interview schedule was developed for the athletes with ID, consisting of an introductory paragraph and a set of interview questions divided into two parts. Part 1: demographic questions and questions regarding the athletes sporting involvement. Part 2: questions regarding the athletes' experience of coaching to date, including both past and present coaching.

An information sheet providing details about the aim of the study and addressing issues such as confidentiality was provided to each participant along with a consent form (separate documents were provided to coaches and athletes respectively). Interviews question responses were transcribed and stored securely.

*Procedure*
The semi-structured interview was administered on a one-to-one basis via either telephone call, Skype or face-to-face. Except for one participant, athlete

interviews were carried out in person to build a rapport with the participant (N=12). Most of the coach interviews took place by telephone call to minimise transportation requirements. Each interview began with an introduction by the interviewer, a reiteration of the aims of the study, confirmation of understanding of the participant information sheet through signing the participant consent form. Athletes were informed that they were allowed to have a parent/caregiver present if they so desired. Each interview lasted approximately between 20 minutes to 1 hour depending upon the length of responses given. Prior to administering questions about their coaching experience (part 2 of the interview), participants were reminded that it would be beneficial where possible to refer to specific examples.

Questions to the coach centered on their opinions surrounding coaching AWID including (a) what potential problems they have encountered, (b) what solutions they have found to these problems, and (c) their overall tips or advice. Athlete questions focused on (a) their opinion of the coaching they have received, (b) what they find helpful about their coaching, and (c) how their coaching could be improved. Alternative versions of the questions were included in the schedule that could be asked at the interviewer's discretion depending upon the level of detail provided by the participant. In the schedule for the athletes some questions also included prompts or example answers to be used in instances where the interviewer believed that the participant might still not fully understand the question. Concluding the interview, the interviewer informed the participants how they could opt in to receive a notification when the results of the study had been published.

*Data analysis*
Thematic analysis was carried out on the resulting interview data based on Braun and Clarke, (2006) six process guidelines; familiarisation with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes and finally producing the report. One researcher was responsible for coding and recoding themes prior to the completion of analysis. This was completed using Microsoft Excel to produce a table of statements, codes and subsequent themes. Due to the nature and variety of the interview questions, the themes were categorised according to the type of interview question in which they responded to. Following the categorisation of these questions and the themes relating to the coach and athlete interviews respectively, comparisons between the interviews were made utilising a thematic map to outline the similarities and differences found between responses given by coaches and athletes. Athlete interview themes were divided according to those related to 'helpful coaching', 'disliked coaching', 'support' and 'advice to other athletes'. Coach interview themes were categorised according to 'sources of knowledge', 'coaching challenges' and 'advice to other coaches'. These themes and the coding of data was audited by a second researcher for quality assurance purposes.

## Ethical considerations

The project was approved by a University ethics committee (Ref. 18/SAS/08C). Consideration to the intellectual disabilities of the athletes was given to the development of the information and consent sheets, and the interview schedule to make them accessible. Consideration was also given to procedures which would need to be activated should any disclosure of abuse occur. No distress was anticipated to be caused by the interview procedure and none was experienced, and no disclosers occurred.

## Results

The results are presented in terms of the themes that emerged in each of the athlete and coach interviews. A pictorial overview of the themes are their relationships is given in Fig 1 and 2.

_Athlete interviews_

    A. _Helpful coaching techniques_
Three themes related to coaching that athletes deemed as helpful. These were 1) Coach Communication; 2) Training Routines; 3) Coach-Athlete Understanding.

1. **Coach Communication** appeared as a prominent theme across the majority of interview responses, largely in relation to the manner in which the coach gave instructions. For example, the importance of effective communication was highlighted by A11 "_helps me to remember to extend my arms when shooting… there is lots to remember so this really helps.".._ Two subthemes also emerged from this theme; **communication as motivation**, and instructional style. Communication as motivation referred to the importance that athletes placed on the coach to motivate or encourage them through verbal communication. This was noted by 7 out of 13 athletes, highlighting that coaches "_use lots of encouragement to do better_ (A4) " ….and that "_encouragement is most important_ (A9)". Several athletes also noted the importance of verbal encouragement in order to take part in or to work harder in training, with A7 noting that their coach uses "_encouragement when I am tired to keep me going_", while A5 also made the distinction that it is important to "_encourage but not force me to train_" as this is likely to decrease their motivation to take part.

    **'Instructional style'** appeared as the other key characteristic of coach communication. This referred to the manner in which the coach provided the athlete with instructions during training or competition. Several athletes commented on this, but it was clear that it was important that the coach fitted their style to the needs of the athletes as these differed

between athletes. A5 preferring "*detailed instructions*" while A2 liked it when their coach "*gives instructions carefully*" being sure to give the correct information in a way that the athlete understands. Another important aspect of giving verbal instructions was mentioned by A1, who emphasized that "*instructions need to be clear*" suggesting that the coach must ensure that they do not leave any ambiguity in the instructions that they provide in order to prevent misinterpretation by the athlete.

While verbal instructions were deemed to be important, several athletes also indicated a preference for other methods of instructional communication, or a combination of several methods. A13 preferred when their coach "*shows me how to move side to side*" indicating the importance of visual demonstrations to athlete learning. As A2 pointed out "*it helps to see how others do the skill*". Physical demonstrations were also mentioned as being helpful, such as the coach "*helping to move my arm*" (A13) while 8 athletes in total indicated a preference for a combination of communication methods such as "*tell me and show me what to do*" (A2) or a combination of verbal and visual communication of instructions. One athlete (A13) suggested that a combination of verbal, visual and physical communication proved to be the most effective method *"my coach tells me, shows me and helps me to move my arm"*.

2. **Training routine**. This theme referred to how the coach organised their training sessions in a way that benefitted the athlete's learning and consisted of three subthemes; **variety, enjoyment and consistency**. In terms of variety, several athletes indicated the value of the coach providing "*different stages or levels to training*" (A1) and that they enjoyed the presence of variety in their training sessions throughout the training week. In particular, both A8 and A9 mentioned that "*learning something new helps to keep it [training] fun*". This suggests that coaching novel skills or tactics is enjoyed by athletes with ID. Variety was also highlighted in terms of changing training partners to increase the competitiveness of training and the skill level of the athlete. In particular, allowing faster or more skilled athletes to train with other athletes of a similar ability level, including mainstream athletes. As A3 acknowledged, "*training with faster people has made me faster*".

Whilst variety within training appeared as a theme, some athletes suggested that varied or novel training sessions should be introduced gradually so as not to cause anxiety to the athlete. A4 indicated that providing 1-2 weeks notice prior to a change in training "*stops me from stressing out or worrying then*". While another respondent highlighted that their reluctance to train with others was alleviated by gradually introducing them into a larger team setting.

Whilst variety was appreciated the athletes also raised the importance of consistency. Some athletes pointed to the effectiveness of repetition in sessions to learn new skills, e.g. "*repeating backhand motion until it was second nature*" (A13) and to serve as a reminder of information or advice e.g. "*my coach tells me the same thing everyday so I know what I need to do*" (A10)'. Whilst variety and consistency may at first seem contradictory what the athletes seemed to be saying was that they liked variety to be introduced in a structured and ordered way, with warning. It was clear from the participants that there needed to be enjoyment in training to maintain motivation and engagement.

3. **Coach-athlete understanding.** This is defined as a mutual awareness of what is required (or the needs) of both parties respectively. A11 highlights the importance of the coach "*working to each athlete's ability level*", suggesting that the coach must be aware of the level that their athletes are able to work at. Within this theme, two subthemes emerged; equality of treatment and help/support**. Equality of treatment** refers to the athlete's desire to be "*coached like any other athlete*" (A1), and not to be treated differently due to their disability. This related primarily to their interactions with the coach, rather than the content of their training sessions, or the coaching methods employed by the coach. A12 spoke of their enjoyment when the coach "*speaks to me like a normal person, he doesn't talk down to me*", while other athletes found it helpful to take part in activities alongside mainstream athletes, rather than being placed into distinct and separate groups. The subtheme of **help/support** emerged as athletes found it beneficial for the coach to listen to and understand their problems, and when they required support and assistance for difficult tasks or handling equipment, for example A3 indicated that their coach "*helps to look after my bike*". One athlete (A12) also suggested that their coach understood their anger or behavioural problems and allowed the athlete to take a "*time-out to cool down*".

*B. Support from others*

In terms of support, two distinct themes emerged in addition to those highlighted through helpful coaching, these were; support from families/parents (n=10) and support from teammates (n=9).

1. **Family/Parent support**. Athletes suggested that parents were supportive through providing encouragement and general advice such as "*go out and try your best! Whatever happens, happens.*" (A7), providing an "*outlet to vent to*" (A12) or *"calming my nerves before a race."* (A6). From a practical perspective parents were also considered to be primary sources of transport, and importantly also providing key financial support.

2. **Support from teammates**. This was highlighted as being an important source of support for athletes through providing encouragement, "*advice and support*" (A8) or "*tips about opponents*" (A13), and helping to relieve stress and pressure prior to a race simply by being in their company, as A3 stated *"being with my teammates before a race takes away the pressure."*. A4 highlighted the important role of team working by stated that "*we don't work against each other, we work with each other*" when training together. This indicates an understanding of the importance of learning from peers to help to mutually improve skills and abilities.

C. *Advice to other athletes*

Two main themes transpired from asking what advice they would give to others, one around developing the coach-athlete understanding and the other about ownership by the athlete.

1. **Developing coach-athlete understanding**. This focused on creating an amicable working relationship between the coach and athlete. A7 suggested that athletes should "*find a person that you trust and that you can understand each other*". Participants suggested that this requires the coach and athlete to be clear on how each party best understands one another. A13 stressed the importance of the athlete *"explain(ing) to the coach how you best understand things."* while A8 emphasised the need to *"get the athlete and coach to try to understand each other".*

2. **Athlete ownership.** This theme related to the athlete taking responsibility for their own learning, placing an emphasis on how the athlete approaches training, rather than the actions of the coach. Enjoyment appeared to be related to this theme through taking the initiative to may it work for yourself (N=8). Participants emphasised the importance of athletes having fun while training, along with suggestions such as "*don't be afraid to try new things*" (A2) or "*change surroundings to keep your sport interesting*" (A12), emphasising the importance of the athlete altering their training habits occasionally to maintain enjoyment of their sport. Patience also arose as a subtheme to athlete ownership. A4 suggested to "*ease into it and if it's hard don't give up, rewards will come*", indicating the need for perseverance. Other athletes (A8, A11, A13) recommended taking time to learn the basic skills before moving onto learning more difficult skills. Finally, listening to the coach (N=4) was developed as a subtheme. Athletes suggested the importance of "*be open minded to what the coaches are saying*" (A12) while another (A3) found it important to "*watch what the coach does and learn from them*".

D. *Disliked coaching techniques*

While responses to questions regarding disliked coaching techniques were limited, with six athletes indicating there was nothing they disliked regarding their coaching, two themes did emerge from those who made responses. These were; some type of unhelpful verbal communication and lack of progression.

1. **Unhelpful verbal communication**. Athletes indicated that sometimes they did not understand verbal instructions e.g. "*don't understand when they explain things verbally*" (A7), suggesting that coaches may not always provide enough clarity to instructions. Another athlete (A8) indicated that they would like to be given more information about each step involved in a race, *"I want to know exactly what to do at each part of a race"*. Aggressive interactions arose as another type of unhelpful verbal communication, highlighted by two athletes. They indicated a preference for being "*talked to, not shouted at*" (A2), while another suggested that sometimes their coach may push them too hard during training.

2. **Lack of progression and ambition,** was also suggested as a negative aspect of the athletes' coaching raised by four respondents. One athlete (A12) expressed concerns that their coach focuses on their strengths rather than identifying their weaknesses, stating that *"sometimes the coach only works on what I can already do, not what I can't"*, while another (A13) wanted more training sessions to be made available for those that are more advanced- *"start an extra training night for people at a higher level"*. Some athletes (A1, A12, & A13) also felt that their training was not competitive enough, which in turn would affect their ability to progress during training.

*Coach interviews*

The themes that emerged from the coach interviews related to three key areas of questions; sources of knowledge, coaching challenges and advice to other coaches.

   A. *Sources of knowledge*
Three sources of knowledge were identified by the coaches, which were; 1. First-hand experience (n=11); 2. Learning from others (n=10); and, 3. independent research (n= 7).

1. **First-hand experience**. This was defined as any action or learning that required the coach to work in direct contact with the athlete. Coaches highlighted learning through "*personal trial and error*" (C6) or "*practical hands-on working*" (C4) while others were more specific in their responses, citing learning by "*responding to athletes needs*" (C2) or learning through experience of a family member with ID. A11

highlighted the importance of first hand experience, suggesting that
"*experience is fundamental to learning*" before adding that it is
"*important to develop knowledge in a real context*".

2. **Learning from others.** This referred to any learning that required
   interaction with individuals other than the athlete themselves. Parents
   and relatives were highlighted as being key figures to learn from. As C3
   stated, "*parents and relatives know them [the athlete] best*" and
   therefore can provide valuable background information regarding the
   athlete, such as potential triggers. Another coach (C3) suggested to
   "*utilise their support network*", which could include parents and
   relatives along with a wider network of support such as care assistants
   or other individuals that are in regular contact with the athlete. Learning
   from other coaches was also considered to be an important source of
   knowledge. Coaches suggested that sharing experiences with other
   coaches and learning from more experienced coaches was a valuable
   method of gaining knowledge, either formally or informally e.g.
   "*mingling with other coaches*" (C8).

   One coach (C7) indicated "*working with other coaches provides more
   information than coaching courses could provide".* This was a
   sentiment that was echoed strongly by a few coaches (N=3) who
   suggested that there was a lack of information currently available for
   coaching athletes with ID. C1 suggested that in this context formal
   coaching courses were "*of limited value"* while C2 and C3 indicated
   that they had no other sources of information outside of first-hand
   experience and learning from others.

3. **Independent research.** This was identified as any further learning
   utilised by coaches that did not require interaction with either the
   athlete, their support network or other coaches. This theme consisted
   of internet-based sources such as search engines or video sharing
   websites such as YouTube, coaching courses (e-learning or in person),
   coaching manuals and information gained through relevant university
   degrees. C12 highlighted that "*I often look on YouTube for new training
   drills".*

*B. Coaching challenges*
Questions around coaching challenges generated the largest amount of data
from the coach interviews, with six themes emerging as a result of the
responses to these questions. These were: 1. Cognition/learning (n=10); 2.
Motivation/self-esteem (n=9); 3. Coach-athlete understanding (n=9); 4.
Communication (n=6); 5. Parental relationship (n=5); 6. Physical limitation
(n=3).

**Identifying best practice in sports coaching for athletes with intellectual disabilities - Coach and Athlete perspectives.**

1. **Cognition/learning.** This emerged as the most consistent theme across respondents. Cognition/learning challenges were regarded as anything related to the athlete's ability to learn or comprehend new information or skills. Difficulties in athletes "*perception and understanding of instructions*" (C8) were highlighted, specifically referring to the potential difference in an athlete with ID's perception of instructions in comparison to a mainstream athlete. Here coaches stressed the importance of the coach choosing how to convey their message or instructions carefully and simply. Individual coaches pointed to specific aspects of learning which may be challenging, for example C9 suggested that athletes may struggle to focus or pay attention while instructions are given, and C2 suggested instructions can be followed. but they must be given in a clear way suitable for the individual needs of the athlete i.e. *"give instructions in a way that the athlete can understand and will be able to follow"* (C2).  Some coaches also pointed to the additional time athletes needed to process information e.g. C3 suggested that coaches should "*allow more time for athletes to understand new concepts*" and added that athletes speed of interpretation of instructions can be much slower than mainstream athletes. One coach suggested that confusion may arise about the source of a problem, "*it is not a communication issue, but a perception issue*" (C8).

   To manage these challenges coaches recommended *" breaking everything down into parts*" (C10).  Other recommendations to help with instructional understanding consisted of utilising cue cards as reminders of warm-up routines and coaching tips (C7). Another coach transferred swimming speed number scales to pictures of objects to indicate the speed that an athlete should aim for, e.g. an aeroplane to indicate a fast speed or a camel to indicate a slower speed (C4).  One coach suggested the benefit of these approaches was to reduce the strain on an athlete's memory while "*freeing up cognitive resources*" (C7).  Using a diverse range of material or "*instructional supports*" (C6) to aid understanding was suggested and endorsed by other coaches. Such aids ranged from the use of visual analogies or demonstrations (such as using a toy frog to demonstrate the leg kick in a breast stroke action), imagery to teach a jump shot in basketball ("*imagine you are superman trying to fly*" C11) or the use of others athletes to help individuals understand technical issues such as training intensity and pacing.

   Finally, using simple terminology such as altering 'stroke rate' to 'stroke count' and breaking down skills into even smaller segments than would be typical were also suggested to alleviate cognitive strain. C10 suggested *"break the course or skill down into smaller sections, work on these sections in isolation, then build back up to the full skill".* This

approach results in a *"longer time than would be given to mainstream athletes"* (C8)*,* and these segments should be repeated until the athlete fully understands, before building up the other components within the skill (C8/C10).

2. **Motivation/self-esteem.** Athletes with ID's perception of their own ability in comparison to mainstream athletes appeared as an issue of self-esteem. C1 indicated that *"many athletes (with ID) struggle with self-esteem as they think they can't compete with non-disability athletes",* while C3 suggested that a key challenge was *to "build self-esteem, confidence and trust"*. To assist with these issues it is important to *"help your athletes to set goals and build confidence"* (C6). This links to the motivational issues that were also highlighted by numerous coaches. C2 suggested that motivational issues were a key challenge due to the difficulty in *"getting your athlete into the best possible shape without pushing them too hard. They are difficult to motivate because when they are tired they don't always want to push themselves".*

   Several suggestions were provided by coaches to deal with motivational and self-esteem issues;
   - *"Motivation can be helped simply by using rewards and encouragement"* (C1).
   - *"Training partners can encourage athletes to keep going when tired"* (C2).
   - *"Self-esteem can be improved by integrating with mainstream athletes of a similar ability level or using familiar people at competition to reassure the athlete"* (C2).
   - *"Set challenges and join in with athlete to complete these"* (C4).
   - *"Use familiar terminology to encourage your athlete"* (C4).
   - *"When they aren't motivated, use short and fun training sessions, focusing on what they enjoy and are good at."* (C5).
   - *"Set achievable and realistic targets to keep the athlete focused, as achieving goals will encourage them to work harder."* (C7).

3. **Coach-athlete understanding.** Coaches commented on the difficulty in developing understanding of their athlete, their ability level and how best to communicate with their athlete effectively. C3 commented that there is *"a lack of communication from the athlete, sometimes I ask questions and don't get any answers".* C6 found it difficult to *"assess the ability level of the athlete",* while C9 noted that *"sometimes you may over or underestimate what exactly an athlete can or cannot do."* C11 suggested that coaches may find it difficult when working in a group *"adapting a task where there are many different ID levels".* It was also noted that it can often be *"difficult to work to an athlete's ability level, as*

*you can't make a task too difficult or too easy - you need to help the athlete reach their potential without overloading"* (C4). Understanding potential behavioral difficulties in athletes was also noted as a coaching challenge, along with the response of athletes that are not being understood. C5 suggested that *"athletes may get angry if the coach doesn't understand them or pushes them too hard".*

To aid in challenges related to coach-athlete understanding, several recommendations were made;

- *"Know the athletes ability level before you start training"* (C9).
- *"Learn about all aspects of an athlete, such as self-esteem, communication issues, and behavioural problems or indicators. This helps to plan a session appropriately."*(C11).
- *"Measure the athletes educational standard"* (C2). It was recommended that this can be achieved through speaking with parents.
- *"Some tasks need to be adapted specifically according to the needs of the players"* (C11).
- *"Take time to learn more about abilities and disabilities"* (C6).

4. **Communication.** Several coaches echoed the sentiment that "*there are no limitations other than communication*" (C5) and that the coach needs to be aware of the communication style that suits the athlete and their level of technical understanding. Different methods of communication were identified as helpful such as the use of demonstrations, physical manipulation, visual instructions and "*pictures to communicate mood or feelings*" (C4). Coaches encouraged the use of a variety of communication methods. However, coaches also highlighted that athletes can suffer from overload due to being overwhelmed with too many questions or stimuli. In order to deal with this, coaches recommended
   - taking time to understand the concerns of their athletes;
   - schedule regular meetings to deal with communication issues and assess how successful the current methods are;
   - using meetings to learn more about triggers and behavioural issues.
   - With regards to behavioural or anger issues, C4 suggested employing "*red and yellow referee cards to deal with anger issues*", with a yellow card indicating that it was time for a chat and a red card indicating that the athlete required a time out from training.

5. **Parental relationships.** These were also highlighted as a potential area of challenge for coaches to overcome while coaching athletes with ID. This challenge ranged from it being difficult to establish parental relationships in order to gain more insight into the behaviour of the athlete and "*getting parents to engage in initial sessions*" (C5) to parents being overprotective and not allowing athletes to grow, or confusing them with unnecessary instructions. C4 highlighted this challenge suggesting that "*some [parents] are proactive and keen, others [athletes] don't have a support network*".

6. **Physical limitations.** These were any physical impairment that could affect the athlete's ability to perform to their sporting potential. These consisted of co-morbid physical problems such as balance, and lower voluntary muscle contraction compared to mainstream athletes. Whilst two of the coaches recognised these as issues which may need adaptations to be made, one considered that these athletes should be treated physically the same as mainstream athletes, suggesting some disagreement  or a range of different experiences in this area.

*C. Advice to other coaches*
Three areas of advice emerged when coaches where asked what advise they would give to others, 1) learn about your athlete (n=10), 2) communication awareness (n=6), and 3) clarity of coaching (n=4).

1. **Learn about your athlete.** This theme referred to advice about the need to better understand the athlete and their disability. For example C1 suggested that coaches should "*learn more about intellectual disabilities*" while C4 emphasised the importance of understanding your athlete on a personal level. While most of the advice in this regard referred to general statements, C11 suggested that coaches should "*establish player profiles*" of their athletes, so that they may better understand the most appropriate coaching method for each athlete, as well as any other important information that should be obtained, such as potential triggers.

   Other areas noted as important were patience (N=5) and problem solving (N=5). Being patient involved suggestions such as "*taking time to explain*" (C6) and "*don't force anything, and dedicate a lot of time*" (C12).  One coach advocated "*don't dive in before getting to know your athlete*" (C4).  Another specific area of advice was around problem solving, which involved the coaches attempting to understand their athletes' limitations or problems. Coaches suggested "*treat problems like a puzzle*" (C3) and that such problems can be solved by "*think[ing] outside of the box*" (C6). Coaches also emphasised the need to treat athletes as individuals, "*no one size fits all*" (C7) and that coaches should try to tailor their training to each athlete and their limitations.

2. **Communication awareness.** This related to the coach being aware of the best method of communication for their athlete as well as maintaining "*communication with all parties*" (C2). Coaches pointed to the importance of being aware of the different available methods of communication, understanding the athlete's level of communication, and communicating in a way that best suited the athlete's capabilities. Furthermore, it was also suggested to communicate with the athlete not just about sports related matters, but on a more personal level in order to develop open communication and good rapport *"build a personal relationship to allow more open communication to flow"* (C3).

3. **Clarity of coaching.** This concerned how to communicate the content of the coaching session in a manner that maintained the upmost transparency and reduced possible confusion for the athlete. For example, C9 suggested to "*never show bad technique, it can be confusing*" while C8 stressed the importance of "*keeping instructions short and simple*". while also keeping skills as 'closed' as possible, i.e. reducing the potential variables to as few as possible while coaching a new skill to an athlete. In terms of more general coaching clarity, it was also suggested that schedules should be provided to athletes so that they are aware of what will occur in competition and can be prepared for this.

**Identifying best practice in sports coaching for athletes with intellectual disabilities - Coach and Athlete perspectives.**
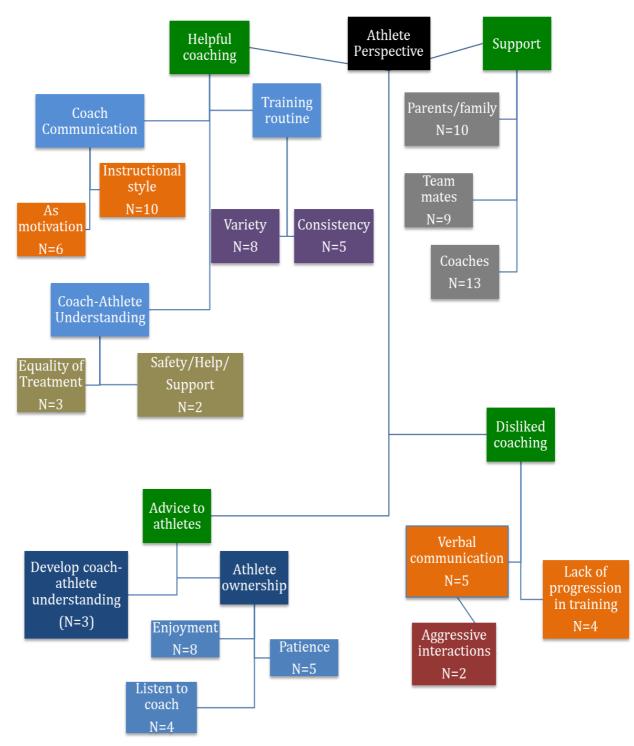


Figure 1: thematic map for Athlete interviews (N=13).

**Identifying best practice in sports coaching for athletes with intellectual disabilities - Coach and Athlete perspectives.**

## Conclusions

The thematic analysis of the data collected from both athletes and coaches indicated that there is a need for coaches to modify their methods specifically for coaching athletes with ID compared to mainstream athletes. The coaches and athletes were closely aligned in terms of areas of the types of areas of adaptations to be made. Three main areas emerged that require modification: the communication style between the coach and athlete; the development of a mutual understanding between both parties; and the methods employed to address issues with regards to motivation. Interestingly, athletes firmly stated that they wanted to be treated similarly to other athletes, and at times felt they were not pushed enough or told the critical feedback which might help them improve their performance. Clearly finding a good balance between pushing the athlete and making adaptations to the right level and in a respectful way is a key skill for the coach working with this population. All the coaches were clear that 'getting to know' your athlete was vital in terms of making the right adaptations to create a successful outcome.

As expected, another key area for consideration related to the athlete's ability to understand the instructions being provided by the coach and how the coach can modify their method of providing instructions to increase the likelihood that the athlete will be able to understand. Coaches had a variety of techniques which they described to try and address this issue, including, the simplification of instructions, along with the use of repetition of instructions, delivering instructions in a variety of ways, giving the athlete time to process information and breaking things down into their component parts.  It is interesting to note that many of the practices adopted by the coaches are based on principles of applied behaviour analysis (ABA), which are commonly used both when working with this population, clinically or educationally (Schenk & Miltenberger, 2019) and in mainstream sport to enhance performance (Vollmer, Peters, Kronfli, & Grauerholz‐Fisher, 2019).  This suggest that ABA would be a good theoretical base on which to base and evaluate ID-specific approaches to sports coaching thin this area.

When asked to provide advice to others in their position, both coaches and athletes indicated the need for their respective counterparts to adapt a particular mentality while coaching or receiving coaching. For example, both coaches and athletes emphasised the need to display patience, however athletes focused on the need for athletes themselves to take ownership of the coaching they receive and to play an active role in their own training. Enjoying training was an element that both coaches and athletes felt was important to encourage sustained engagement in training.

An interesting finding of the study related to the importance of a support network highlighted by the athletes. Parents/family, team-mates and coaches were all consistently highlighted as being important figures of support for the

athlete's involvement in sport. This indicates that it is not only coaches that are responsible for the success of their athletes in sport, but suggests the importance of others for athletes to develop and excel. However, coaches also pointed to the balance to be achieved with parents of gaining their support, but also avoiding over involvement. It was encouraging that athletes also identified their team mates as providing support, giving further evidence to the importance of sport in building social and support networks (Smith, Wedgwood, Llewellyn, & Shuttleworth, 2015).

Whilst coaches had a lot to say about their experiences in coaching athletes with ID, and clearly saw a distinction between coaching this population and other populations, they were clear that the resources they had available to them to inform this work were severely limited. In terms of primary sources of knowledge for coaches, the findings supported those of MacDonald et al (2016), with the most common source of knowledge relating to first hand experience, with learning from others, especially other coaches. Coaches actively sought out additional information, but commented that this was rarely tailored to this population and they then needed to adapt this information. In terms of formal education such as coaching courses and qualification there seemed to be little reliance as it was identified that they rarely addressed this area. This is an important finding in terms of the implications not just for developing coaches with these specialist skills but also in terms of new and developing coaches being introduced to work with this group. If newly qualified coaches do not feel skilled in this area they are unlikely to seek to work with this group, leading to a continuous lack of coaches working in this area.

In conclusion, the current research study aimed to provide an insight into the best coaching practices employed with AWID's through gaining the perspective of both coach and athlete alike from one-to-one semi-structured interviews. This research has provided a stepping-stone for future research to further investigate this topic, while simultaneously providing real world application for coaches currently working within the field of intellectual disability sports coaching. It is imperative that equal attention is given to understanding what having ID means, and well to developing expertise in in sports coaching within this population. This is nicely summarized by one of the coaches as:

*"Take time to learn more about abilities and disabilities".*

In terms of practitioner implications, the research has highlighted the need for a coaching syllabus to be specifically designed for coaches working with athletes with ID to ensure that all athletes are afforded equal opportunities and access to high level, disability-specific and appropriate coaching.

**Identifying best practice in sports coaching for athletes with intellectual disabilities - Coach and Athlete perspectives.**

## Recommendations

1. More coaching resources should be developed in the area of coaching athletes with ID;
2. Coaching qualifications and syllabi should be reviewed and should include information about coaching athletes with ID;
3. Specialist training modules should be developed in this area;
4. Applied Behaviour Analysis as a theoretical approach to underpin sport coaching in this area should be further explored and evaluated;
5. Equal attention should be given to understanding what having ID means and how established coaching techniques and skills can be adapted for use with this population.

References

Boardley, I. D. (2018). Coaching efficacy research: Learning from the past and
looking to the future. *International Review of Sport and Exercise Psychology,
11*(1), 214-237.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative
Research in Psychology, 3*(2), 77-101.

Clark, B., & Woodson-Smith, A. (2018). Sport for all: Considerations when
coaching in disability sport. *Professional advances in sports coaching* (pp. 78-
100) Routledge.

Dehghansai, N., Lemez, S., Wattie, N., & Baker, J. (2017). A systematic review of
influences on development of athletes with disabilities. *Adapted Physical
Activity Quarterly, 34*(1), 72-90.

European Commission. (2007). *White paper on sport.* ().COM, European
Commission, 391, final. Retrieved from https://eur-lex.europa.eu/legal-
content/EN/TXT/?uri=LEGISSUM%3Al35010

Hassan, D., Dowling, S., & McConkey, R. (2014). Changing perspectives on
intellectual disability through sport. *Sport, coaching and intellectual
disability* (pp. 29-47) Routledge.

**Identifying best practice in sports coaching for athletes with intellectual disabilities - Coach and Athlete perspectives.**

Kassim, A. F. M., & Boardley, I. D. (2018). Athlete perceptions of coaching effectiveness and athlete-level outcomes in team and individual sports: A cross-cultural investigation. *The Sport Psychologist, 32*(3), 189-198.

MacDonald, D. J., Beck, K., Erickson, K., & Côté, J. (2016). Understanding sources of knowledge for coaches of athletes with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities, 29*(3), 242-249.

Martin, J. J., & Whalen, L. (2014). Effective practices of coaching disability sport. *European Journal of Adapted Physical Activity, 7*(2)

Patterson, S., & Smith, V. (2012). *Getting into the game: Sports programs for kids with autism* Jessica Kingsley Publishers.

Schenk, M., & Miltenberger, R. (2019). A review of behavioral interventions to enhance sports performance. *Behavioral Interventions, 34*(2), 248-279.

Shapiro, D. R., & Pitts, B. G. (2014). What little do we know: Content analysis of disability sport in sport management literature. *Journal of Sport Management, 28*(6), 657-671.

Smith, B., & Sparkes, A. (2012). Disability, sport and physical activity. *A Critical Review.in N.Watson, A.Roulstone, & C.Thomas (Eds.), Routledge Handbook of Disability Studies,* , 336-347.

**Identifying best practice in sports coaching for athletes with intellectual disabilities - Coach and Athlete perspectives.**

Smith, L., Wedgwood, N., Llewellyn, G. M., & Shuttleworth, R. (2015). Sport in the lives of young people with intellectual disabilities: Negotiating disability, identity and belonging.

Townsend, R. C., Smith, B., & Cushion, C. J. (2015). Disability sports coaching: Towards a critical understanding. *Sports Coaching Review, 4*(2), 80-98.

Vollmer, T. R., Peters, K. P., Kronfli, F. R., & Grauerholz-Fisher, E. (2019). Applied behavior analysis. *The Encyclopedia of Child and Adolescent Development,* , 1-14.

Wareham, Y., Burkett, B., Innes, P., & Lovell, G. P. (2017). Coaching athletes with disability: Preconceptions and reality. *Sport in Society, 20*(9), 1185-1202.