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Pan-European Work Force Audit (Output 1) and Best Practice Case Study (Output 2) Report

The Experiences of Coaches in Paralympic and Disability Sport

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We look forward to continuing our joint work with all involved.

If you have any observations or comments that may add further explanatory powers to this report, please email: info@paracoach.eu

Kind regards

Para Coach Team

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1.0 Executive Summary

Introduction

This report is part of the Erasmus Plus funded ParaCoach project led by Liverpool John Moores University seeking to enhance Para Coaches learning, mobility and employability across the European Union. The significant outputs of the ParaCoach project are the development of a European Para Coach Framework to act as a non-regulatory reference point for the development of coach education across the EU. Additionally, a freely available Massive Open Online Course will be developed to support the learning and development of coaches across the EU. Hence this report aims to capture and analyse the characteristics of the Para Coach workforce, and provide examples of best practice in order to support the development of the framework and MOOC.

Disabled people have the right to participate and excel in sport and physical activity across the European Union. However, the majority of coaches tasked with providing quality sporting opportunities to performers in this unique context are underprepared and often unqualified. Worse still, the social stigma and fear of disability may prevent some coaches from taking up a position specializing in para sport or including disabled athletes in mainstream opportunities. Therefore, the Para Coach project shares the EU's social agenda to ensure that disabled participants are able to access more high-quality sporting opportunities led by appropriately trained coaches

Methodology

To explore the characteristics of the Para coach workforce and highlight best practice within this context, a two-stage methodology was employed. The first stage included an online survey (including closed and open-ended questions) through which we identified common characteristics that described the workforce. Given the international focus of the project, the survey was followed up with a qualitative methodology through which semi-structured interviews were employed to gain clarity and richer accounts of the participants' experiences. This qualitative approach was also utilized when exploring best practice case studies. Specifically, the employment of appreciative inquiry allowed participants to describe and explain their perceptions of best practice through a semi-structured interview.

To gain insight into the Para coach workforce characteristics and best practice, the following purposeful sampling criterion were used. Participants coaching within a recognized Para/Disability sport on a regular basis with a specific group of performers with an emphasis on guided, purposeful improvement of performance (ICCE). Coach educators were those with direct responsibility for the development of coach education provision within an established sporting agency. As such the survey sample included coaches (N=313), with 20 undertaking follow up interviews. Best practice case study interviews were undertaken with coaches (N=15) and coach educators and policy makers (N=11).

Survey data was collected through an online platform (Bristol Online Survey) with interviews audio recorded and transcribed verbatim. Numerical responses to the survey were descriptively analysed, whilst qualitative data was analyzed through an iterative approach guided by the

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process of constructivist grounded theory. This involved moving back and forth between codes and categories. Once the categories were identified the report team met to discuss, challenge and agree the final categories that were pertinent to the report.

Key Findings

1. Blended profession – the workforce consisted of full time (N=79), part time (N=53), sessional (N=65) and volunteer (N=112) coaches and therefore Para Coaching could be considered as a blended profession.
2. Lack of a coaching pathway – analysis of coaches' interviews highlighted the serendipitous nature of stepping into coaching. Meaning, for most of these coaches, their step into coaching occurred through 'accident' resulting through association with the sport as an athlete, parent or career.
3. Lack of formal coach education – of the 313 coaches who completed the survey, 56% stated that they held a National Coaching Qualification; whilst 31% reported that they did not hold a National Coaching Qualification. Of the 56% of coaches who held a National qualification, only a small percentage of coaches provided information about the level and name of the qualification. Specifically, coaches reported the following qualifications: level 1 (3%), level 2 (7%), level 3 (9%) and level 4 (4%) coach qualifications. Of the coaching cohort, only 19% reported that they had received Para specific coach education. Meaning, the majority of coaches had not received Para specific coach education.
4. Lack of consistency across Countries for coach education – it became clear during the analysis of survey responses that there were differences with regards to the name and level of coach education qualifications between counties in relation to the European Coaching Qualification Framework (ECQF). Hence making EU wide comparisons became problematic.
5. Lack of Continuous Professional Development (CPD) – 67% of coaches had engaged in CPD opportunities since they began coaching. 56% of these coaches had engaged in CPD in the past 12 months. However, 57% of coaches noted that their overall CPD opportunities did not relate to Para sport. In addition, the majority of coaches did not receive any form of mentoring support. Specifically, only 5% of coaches alluded to any mentoring opportunities. However, qualitative analysis of follow-up interviews illustrated that coaches valued learning from their peers.
6. Reliance on informal learning – coaches perceived learning from experience to be most effective (42%), followed by non-formal learning (31%), and formal learning (27%).
7. Gaps in knowledge – analysis of qualitative survey responses revealed that coaches requested the need for knowledge relating to: impairment, classification, sport and event specific requirements, practice planning and delivery, sport science and sport psychology. This may further position Para coaching as a blended profession in which gaps in knowledge are reflective of individual, contextual and domain level needs.
8. Best practice – analysis of best practice case studies suggest that pockets of best practice existed in some sporting contexts relating to: integration of coach education, integrated training opportunities, creating new sporting opportunities, takin a person-centered approach to coaching and a need for advocacy

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Future Directions

The key findings of this report highlight a fragmented and under-resourced coaching workforce with regards to coach education, workshops and mentoring, hence validating the need for the ParaCoach Project. Indeed, by raising the profile of the vital work para coaches do and supporting the creation of a more integrative coach education and support system, targeted initiatives that will both mobilise the coaching work force and ensure disabled participants are included in more high-quality sporting opportunities. However, to gain more traction, greater commitment to policy enactment, research and financial resource is also required to ensure opportunities are fit for purpose.

Definition of terms

Impairment – refers to the altered function of the biological body which restricts and disadvantages individuals. Acknowledging 'impairment effect' in this study is an attempt to allow participants to express 'knowledge and practices' that reflects the complexity, opportunity, severity and diversity of impairment.

Disability – refers to the socially constructed forms of 'restrictions' and 'oppressive' practices that 'disable' people with biological impairment(s). Taking this approach provides an opportunity to highlight the unequal distribution of resources and opportunities that restricts the development of quality sporting opportunities.

'People with disability' or 'Disabled people' – often used within the coaching literature and reflects national and contextual influences. The first adopts a 'people first' position acknowledging a shared humanity between disabled and non-disabled groups. Whilst the second foregrounds the structural and contextual barriers placed on people with impairments.

Disability or Adapted sport - is a broad term used to describe sports that accommodate people with physical, sensory and intellectual impairments (DePauw & Gavron, 2005).

Paralympic sport - refers to sports that are part of the Paralympic Games programme (IPC, 2019).

Para sport - often used as an umbrella term to accommodate both Paralympic and Disability sport.

Para coach - is a term used to refer to coaches who coach across Paralympic and Disability sports and along the athlete pathway

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2.0 Introduction

Sport plays an integral role both in the lives of individuals and shaping of European society. Indeed, the power of sport in fostering lifelong physical activity and the associated benefits to health and wellbeing are acknowledged. Hence the European Disability Strategy 2010-2020 (aligned to the UN Convention on the Rights of Persons with Disabilities) in recognising that over 80 million people within the EU have some form of disability restricting their access to sporting opportunities have called on EU countries to both 'promote and prioritise' participation and access to sporting activities for persons with disabilities. Here the role of the coach arguably plays an important role in the inclusion of disabled people in sport. Indeed, recent reports estimated that nine million volunteer, part-time and full-time paid sport coaches provide 100 million EU citizens with opportunities to fulfil their sporting ambitions (European Commission, 2016, 2017; CoachLearn, 2016). Hence, for the first time in EU policy, the role of the coach is now recognised as a pivotal resource in achieving EU values and principles (The Work Plan for Sport 2017-2020). Additionally, the Estonian Presidency of the European Council (July to December 2017) also concluded that the coach plays an integral role in developing people and society, and promoting values such as inclusion, equality and respect. As such, a suitably educated coaching workforce is of paramount importance within EU policy. However, most coach education falls outside of national qualification frameworks and those that do fall under the auspices of vocational education and training. Hence, increasing both the number of opportunities to engage with, and the 'quality, relevance and capital' of vocational education and training (VET) is a European Commission priority. Indeed, within the Copenhagen process (2002) and the Education & Training 2020 Strategy, Member States have committed to investing in VET to raise the employability of people, reduce skills' mismatches, facilitate the transition into employment and promote personal development and quality of life (European Commission, Riga Conclusions, 2015).

Against this backdrop of EU policy, research exploring the number of coaches, their roles, and the education and training needs within Paralympic and Disability (Para-Disability) sport is minimal at best (DePauw, 1986; DePauw & Gravron, 1991; Duarte & Culver, 2014; Townsend, Smith & Cushion, 2015). This despite calls for research in the para coach context to be prioritised over 30 years ago (DePauw, 1996) and more recently Gutt's (2013) in identifying the disconnected and often siloed occupational landscape of disability sport across different countries, recommending that the education and training of para coaches is best served through a coordinated approach. This lack of synergy across Europe means that the number of coaches, their demographic profile, sporting experiences, coaching qualification training and education is currently unknown. Even the number of coaches with a disability has not been identified. Therefore, given North's (2009) critique of the under-qualified coaching workforce (UK) in general, it is a concern that coaches may not hold adequate training nor qualifications specific to the Para-Disability sport as a condition of entry. Furthermore, this lack of adequate training and education may be a barrier to increasing the coaching workforce. Hence, a transnational EU wide approach is warranted.

The importance of exploring the contribution of coaches and coaching to facilitating wider social policy outcomes for people with disabilities in the disability sport context cannot be overstated. Firstly, the Paralympic Games and wider elite disability sport events has received increased political, economic and societal recognition (Misener & Darcy, 2014; Patatas, et al, 2018) which may place greater levels of accountability on coaches to predict and achieve successful performance outcomes. Secondly, disability and impairment are complex

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phenomena (e.g. acquired-congenital, stable-unstable, severe-minor, physical-sensory, wheelchair-ambulant) which means that the Para workforce coaches across the EU are not only presented with functional challenges but may be faced with participants whereby sport is the mechanism for the reconstruction and renegotiation of identity after traumatic injuries, rehabilitation, empowerment and independence. Furthermore, the importance of exploring Para sport also lies in its intersection with wider societal constructions of disability and notions of equality and inclusion (Purdue & Howe, 2012). Indeed, the International Paralympic Committee (IPC) strategy outlines a clear a concerted focus on social issues such as disability empowerment, increasing the participation of people with disability and raising awareness of the disabling barriers in society (IPC, 2019). However, the role and contribution of coaches in achieving such outcomes is unclear.

Therefore, the recruitment, education and development of coaches who are able to provide high-quality opportunities for disabled participants to achieve their sporting, activity and health related goals is of paramount importance. Therefore, this report attempts to draw together a pan-European exploration of the Para coach workforce, its developmental needs and how best practice is conceived.

3.0 Conceptual Framework

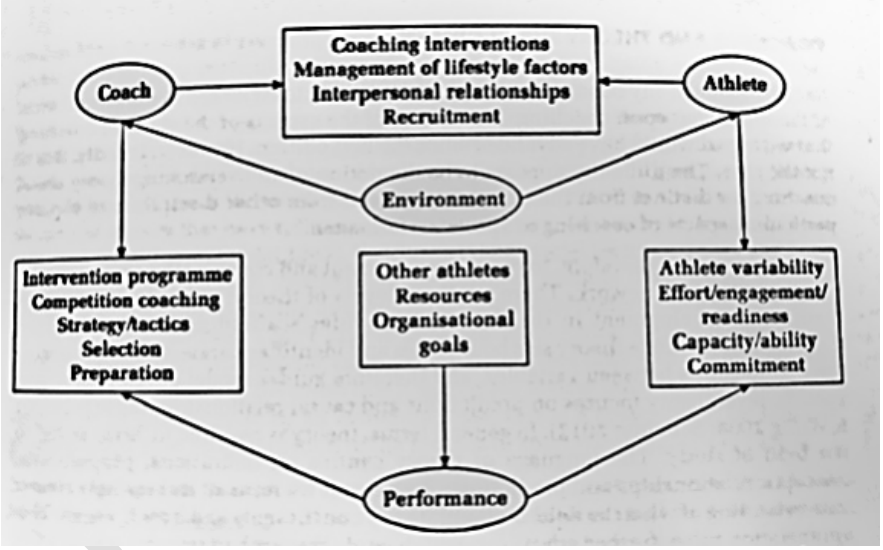


Figure 1. Factors arising from the complexity of interaction of athlete, coach, context and performance.

The evolving field of sport coaching considers coaching as a complex interpersonal practice that encompasses coach, athlete and context (e.g. Lyle, 2002; Cushion & Jones, 2006; Lyle & Cushion, 2010; Townsend et al., 2015). Therefore, the International Sport Coaching Framework (ICCE, 2013) and Lyle and Cushion's (2017) coaching model (figure 1) provided a map to consider the key factors impacting coaching as a complex social activity. As such, coaching is considered to revolve around the organisation and delivery of practice interventions and competition opportunities that in combination provides athletes with varying levels of outcome goals. Hence the role of the coach, therefore, is to effectively guide, improve and develop athletes according to their specific need within a given sporting context. Consequently,

according to the ICCE (2013) this is best achieved through athlete-centred coaching where the coach demonstrates a commitment to 'lifelong learning' to further develop their expertise and effectiveness.

Learning as a coach is integral to the development of high-quality coaching opportunities (Townsend, et al, 2017). However, research within para coaching suggests the need for ongoing professionalization of coaches within this context lacks specific provision and structure (McMaster, et al., 2012; Tayler et al., 2014 & Townsend et al., 2017), a gap identified over three decades ago (DePauw, 1986). Therefore, within this current study exploring how coaches 'learn' and 'develop' was considered an important factor in meeting the aims for this EU wide Erasmus funded project. To do so, like previous researchers (Mallett et al., 2009; McMaster et al, 2012; Douglas et al., 2018), Nelson et al's., (2006) adaptation of functional educationalists Coombs and Ahmed's, (1974) 'three modes of education' : (1) informal education, (2) formal education, and (3) nonformal education were adopted (p. 8). For coaches, formal education takes place within the context of sport governing body coach education certification provision, which is typically hierarchically structured, undertaken over and between various time frames (e.g. weekends, months and years). With the main focus on certification of the work force, these courses are rarely followed up and the generic nature has come under attack for failing to equip coaches for the realities of practice (Mallet et al., 2009; Tawse et al., 2012; Duarte & Culver, 2014; Townsend et al, 2017). In contrast to formal coach education, non-formal sites of learning include the provision of conferences, workshops and seminars (Nelson et al., 2006). However, despite attempts to provide more authentic and contextual experiences, coaches question the level of knowledge and the short time frame (Mallet, et al., 2009). Within Para sport, whilst coaches seem to appreciate attending conferences, these opportunities were not as available when compared with mainstream provision (Cregan, et al, 2007; McMaster et al., 2012; Duarte & Culver, 2014; Douglas et al., 2018). Finally, informal learning refers to knowledge gained through personal experiences and social interactions which is not always a conscious activity (Mallett, et al., 2009; Cushion et al., 2010). Consequently, informal learning takes places through experiences as athletes (e.g. Douglas & Harding, 2014), through interactions with other coaches, mentors, a variety of science related disciplines, athletes and family (Cregan et al., 2007; Tawse et al., 2012; Duarte & Culver, 2014; Falcao et al., 2015; Douglas et al, 2018). Whilst identifying the three modes of learning opportunities provides a useful conceptual framework, it is important to recognise that learning is lifelong, complex and contextually related as Coombs and Ahmed (1994) propose in the following definition:

> 'the lifelong process by which every person acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and *exposure to the environment'*. (p. 8, italics added).

Consequently, given the relationship between learning and context, in this case Paralympic / Disability Sport (Para Sport) it is important to acknowledge how disability impacts learning and practices of Para Coaches (Townsend et al, 2018). This will be elaborated upon in the next section.

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3.1 Conceptualising Disability

Considerable reference has been made in relation to the notion of coaching within the unique context of disability sport within this report. However, this section attempts to explore the differing ways disability is conceptualised, discuss its contested nature, and describe how it translates within current coaching literature. In doing so, the section provides a critical gaze at practices and structures that may constrain the development of inclusive effective coaching in this under resourced context.

3.1.1 Disability and Sport

The term 'disability' is a contested concept that has social, psychological, biological, historical and political dimensions. Situating the impaired body within sporting practices provides a unique, progressive and multi-layered approach to understanding disability. However, despite the potential of sport to challenge and disrupt negative cultural attitudes towards disability, sport can also exacerbate and reproduce inequalities for disabled people. For instance, disabled participants are often excluded from sport and physical activity and their participation can be restricted by a complex and multi-layered set of individual, social, cultural and economic barriers (DePauw & Gavron, 2005; Misener & Darcy, 2014). Key barriers that can limit the participation of disabled people can include economic (e.g. welfare cuts and unaffordable access to health-promoting activities such as sport); cultural, comprising entrenched discriminatory attitudes towards disability; social, consisting of inaccessible facilities, or, importantly, a lack of knowledgeable, qualified and 'inclusive' sports coaches (Townsend, Cushion & Smith, 2017); or individual, related to the health effects that impairment can have on social life. Therefore, to understand why disabled people are often viewed negatively and restricted from coaching practice, the notion of disability requires some consideration. Below we outline different perspectives on disability.

3.1.2 Medical model

Disability is traditionally understood according to medical model terminology (Barnes, 1999). The medical model perspective positions impairment and its effects as disabling, and has its conceptual roots in medicine and rehabilitation, encompassing an individual approach to disability centred on a desire to diagnose and treat:

> "To acquire an impairment is to become the object of professional attention. This `expert' defines an individual's needs and how these should be met. The aim is to overcome, or at least minimize, the negative consequences of the individual's 'disability'" (Barnes et. al., 1999: 21)

The medical model is deeply entrenched in sport as it forms the basis for many of its organizing systems (e.g. classification).

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3.1.3 Social Model

Arising as part of the disability rights movement, the emergence of the social model challenges the medical model view that disability is primarily a direct result of impairment. The social model positions disability as a socially constructed form of oppression that restricts people with impairment (Finkelstein, 2001). Simply, the social model places emphasis on the disabling barriers people face, with impairment only becoming salient and disabling in specific settings (Oliver, 1996; Barnes & Mercer, 1996). The social model provides an important perspective to examine Para coaching, providing insight into the societal barriers that impact on the delivery of disability sport. For example, a lack of financial support, reduced coaching workforce, limited coach education and training opportunities (Taylor et al., 2014; Townsend, Cushion & Smith, 2017) and shortage of specialist equipment are evident in studies (Bush & Silk, 2012).

3.1.4 Social relational model

Researchers within Para coaching (e.g. Allan et al., 2019; Culver & Werthner, 2018; Townsend et al., 2015; Townsend, et al, 2018) have drawn from wider critical disability studies to underpin research with the social relational model perspective (cf. Thomas, 1999). The social-relational model of disability provides some middle ground between the medical and social models of disability. This model foregrounds 'impairment' as having both internalised and externalised effects as the individual navigates differing social and physical contexts. The social relational model recognises that people with impairment are 'disabled' through socially constructed forms of 'restrictions' and 'oppressive' practices and enabled in certain contexts (e.g. Paralympic games). Thus, the social relational model focuses on the social construction of disability, whilst not overlooking the real and direct impacts that impairment can have on individuals' engagement in their social life. Specifically, the social relational model consists of the following concepts: 1. Impairment effects – reduced function resulting from physical and social mechanisms 2. Social construction of disability – perceptions and discourses 3. Physical and structural barriers – e.g. exclusion from support service or access to buildings 4. Psychological state – the effect of the various forms of oppression on emotion and behaviour (Thomas, 1999, 2004, 2007).

3.1.5 Human rights model

The final model used to frame disability is the human rights model, which recognises that disabled people have equal rights to participate in society and sport. As such, this model has been instrumental in shaping the policies and practices that govern national and international law. For example, the UK equality act (2010), EU equality act (2015 and UN Convention for Human rights all have a focus on the equal rights of disabled people, specifically issues of access, choice and quality to areas such as employment, education, healthcare and leisure and recreation opportunities. Whilst increased attention within law is welcomed, this has yet to translate into appropriate education and training of coaching working in Para sport (McMaster et al., 2012, Townsend et al, 2015).

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3.1.6 Summary

In acknowledging the importance of understanding disability through different models, this review aims to look beyond an individual's level of functioning or motivation and focus on the broader structures of Para sport that influence the work, learning and education of coaches. The combination of the coaching model and models of disability offers this project the opportunity to explore Para coaching broadly across the EU and offer depth as to the contextual mechanisms that impact the education, development and mobility of the Para coaching work force.

4.0 Aims and objectives

The aim of this report is to provide an overview and analysis of the Para coaching workforce across the European Union. To do so, the following research informed questions which were used to guide the research direction:

1. The coach – what is the demographic profile of the para coach workforce? What are their roles, employment status and years of experience? What levels of education and coaching qualifications do they hold? How do coaches learn and where do they receive support to enhance their learning? What gaps in knowledge exist within this coaching population? How is best practice exemplified in Para sport?
2. The athlete – what is the demographic profile of athletes coached? What key characteristics informs coaches practice? How does disability and impairment impact the coaching process? What additional supported mechanisms are considered relating to impairment?
3. The performance goals - what are the outcome goals that guide coaches practice?
4. The environment – in what ways does the para sport environment impact coaching process and practice across the EU with particular reference to disability?

Subsequently, this review consisted of two interrelated phases. Phase one consisted of a workforce audit in order to gain an understanding from a broad representative sample of coaches about their knowledge, education and practice. The second phase of the review was to build contextually-detailed analyses of best practice as a means of informing coach development. This two-stage approach ensured both depth and breadth across the Para coaching workforce.

5.0 Methodology

This report utilised a mixed-method design where qualitative and quantitative data were collected concurrently, analysed separately and synthesised in a final interpretation. To structure the discussions around Para coaching and provide insight and direction for Para coach development, literature from relevant domains including coaching effectiveness and models of disability was used.

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5.1 Research Design

5.1.1 Phase One – Quantitative Data

The first phase of the questionnaire was informed and designed with reference to the conceptual framework (see section 3.0). Therefore, the questionnaire was divided into various questions associated with the 'coach', 'athlete', 'environment', 'performance' and 'impairment effect'. The first draft was reviewed and modified by the Para Coach Project Management Board (PCPMB) before emailing to experts in the field (e.g. academia and disability sport) for further critique. The second draft was then piloted online by a sample of coaches within the organisations associated the PCPMB and underwent further adjustments. The pilot was undertaken to ensure participants understood the questions and there was a logical flow to the survey. Additionally, the pilot allowed us to guage the time needed to complete the questionnaire which ranged between 8 to 15 minutes. The final version went live using the Survey Monkey online platform.

To capture a breadth of insight from across the EU, the online survey was translated into Polish and Hungarian. This was undertaken through careful consideration and discussion between English and respective native speaking members on the PCPMB to ensure alignment with cultural norms. Hence modifications were made to fit the national context and proved to be a time-consuming exercise.

5.1.2 Phase Two – Qualitative Data

Complementing the online survey, data was collected through semi-structured interviews with 20 coaches to provide a richer account of the Para coach context. Interviews were used to elaborate on coaches' and coach educators' responses with reference to learning, education and development.

Secondly, an appreciative inquiry (AI) design was taken to generate 26 case studies from interviews. Appreciative inquiry is a research methodology adopting a strengths-based focus that seeks to identify best practice and share it. It does so on the basis that "every culture, and every person in that culture, has strengths that can be amplified, and those strengths can and should be the starting point for positive change" (Enright et al. 2014, p.916). More specifically, through AI, researchers gather accounts of best situated practices, and rich descriptions of positive experiences of a phenomenon. These accounts are then utilised by practitioners as a basis for future action. In doing so, AI not only seeks to describe best practices, but also does in a manner that helps others to consider the action needed to adopt such practices. The research was therefore designed on the assumption that practitioners have contextually rich experiences that are valuable, and that sharing these experiences is a means of effecting change in wider contexts. These sentiments are consistent with the ambitions of the ParaCoach project and thus AI is an appropriate methodology to guide the exploration of best practices in disability coaching.

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5.2 Procedures

5.2.1 Ethical considerations

As lead organisation, Liverpool John Moores University ensured data collection followed ethical guidelines. To that end, ethical approval was provided the by LJMU University Research Ethics Committee (UREC), following General Data Protection Regulations (GDPR) and where appropriate other UK and European Union Law.

5.2.2 Sample and recruitment

In simple terms, qualitative approaches including AI asserts that those best placed to describe effective practices are those that deliver them. In this study, this means that those best placed to describe excellent disability coaching or coach education are coaches and coach educators themselves. Accordingly, a purposeful approach (Smith and Sparkes, 2013) to sampling was undertaken to recruit participants with experience of either coach education or coaching in a disability sport context. Additionally, in order to develop a range of contextually best practice cases, participants were recruited including those from:

- A range of ethnic backgrounds
- A mix of genders
- A community sport context
- An elite sport context
- A range of European Countries
- A range of sports and activities
- Both individual and team sports
- Those with impairments themselves
- Participants with a range of impairments

5.2.3 Interviews

In total, 46 semi-structured interviews (n=46) were completed by experienced researchers trained both in qualitative interviewing and the AI methodology. Face to face interviews (N=3) took place at locations that were comfortable and familiar to participants e.g. sports facilities. This was appropriate because the coaches inhabit these environments as part of their everyday naturally occurring practice. Due to the geographical spread of participants, the majority of participants (N=43) were interviewed using technology such as 'Skype', 'Facetime', 'WhatsApp'. Synchronous VOIP (Voice Over Internet Protocol) interviews using these technologies have been lauded for facilitating access to individuals who may be hard to reach (Lo Lacona, Symonds, & Brown, 2016). Specifically, 'VOIP' overcomes challenges of time and space and therefore is an effective means of including practitioners who may otherwise have been excluded due to geographical location.

Interviews schedules were guided by the need to provide a richer account of the Para Coach workforce across the EU and their practices. As such follow up interviews were guided by the

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coach, athlete and context configuration (see section 4.0) and the need to gain clarity regarding coaches' responses to survey questions.

Additionally, to explore coach and coach educators' understanding of 'best practice' the interview schedule guided by AI methodology consisted of 3 elements:

- Discover – wherein interviewees described their most positive experiences of coaching or coach education in a disability setting. This is represented in the first phase of questions.
- Dreams – where the interviewees described their aspirations and idealised versions of coaching and coach education in a disability context.
- Design – wherein the interviewees described the practical steps necessary to recreate the successful experiences

Regardless of the format (Face-to-face, or Skype), all interviews were recorded digitally to enable data analysis.

5.3 Data Analysis

5.3.1 Quantitative Data

Once we had received the translated surveys from Poland & Hungary, data was coded in an Excel document and entered into SPSS for analysis. Descriptive statistics were generated for each question, illustrating frequency distribution and percentages. Qualitative responses were also coded in an excel document and were quantified through content analysis using the qualitative analysis software package *Nvivo*.

5.3.2 Qualitative Data Analysis

Interview transcripts (follow up and best practice case studies) were examined carefully and where applicable '*initial codes'* were identified through an inductive process of 'word by word' 'line by line', 'paragraph by paragraph' or 'incident by incident' coding (Charmaz, 2000, 2006, 2015; Charmaz et al., 2018). *Focused coding* was the subsequent step in the data analysis process (Charmaz, 2000, 2006, 2015; Charmaz et al., 2018). Here, through examining the *initial codes*, those that were frequent and or significant in answering the research questions were reduced into *focused codes* or *categories*. This iterative process of moving between *initial* and *focused* coding demonstrated a commitment to grounding theory through 'listening attentively to the voices of participants (Fitzgerald & Kirk, 2009, p. 437). To makes sense of, and explain the relationship between categories and theory, where possible models of disability were utilized.

5.3.3 Summary

Within this section we have outlined the methodological principles guiding the data collection and analysis processes. Hence the results of this multi-phase data collection process will now be presented in the next sections.

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6.0 Results and Findings

6.1 Phase 1: Workforce audit quantitative results

6.1.1 Descriptive Information

313 participants completed an **online survey:** gender (68% male, 31% female); age (M = 64 years, *SD* = 9.90); coaching experience (M= 15 years, *SD* = 12). Participants worked across 54 different sports *(highest athletics N=47) and* represented 13 Countries (*Countries within EU* N=18, *Countries outside of EU* N=8). Table 1 (below) represents the number of years coaches had been employed in their current position, and Table 2 (below) represents the number of years coaches had been working in the profession overall. Participants predominantly worked at either National Governing Body level (N=115), or within the Community (e.g., local clubs; N=129). Participants had a range of athletic experiences, specifically, participants had competed in sport at recreational/community level (N=53), Regional level (N=45), National level (N=73) and International Level (N=128).

Table 1: Years of coaches in current position

	Frequency	Percent
0-2 years	62	19.8
3-5 years	102	32.6
6-9 years	43	13.7
10+ years	99	31.6
N/S	7	2.2
Total	313	100.0

Table 2: Overall years as a coach

	Frequency	Percent
0-2 year	23	7.3
3-5 years	43	13.7
6-9 years	33	10.5
10-15 years	53	16.9
16-20 years	16	5.1
20+ years	82	26.2
N/S	63	20.1
Total	313	100.0

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6.1.2. Coaching - A Blended Profession

Information relating to coaches' roles, employment status, and national salary was indicative of a blended profession. We used the International Coaching Council for Excellence guidelines to categorise coaches' roles, illustrated in Figure 1. 34% (N=107) of participants who completed the online survey considered themselves as a Master Coach, 23% (N=72) of participants considered themselves to be an Advanced Coach, 25% (N=77) of participants considered themselves to be a Coach, and 6% (N=19) considered themselves to be Assistant Coaches. There were also a number of participants who did not answer this question (N=38).

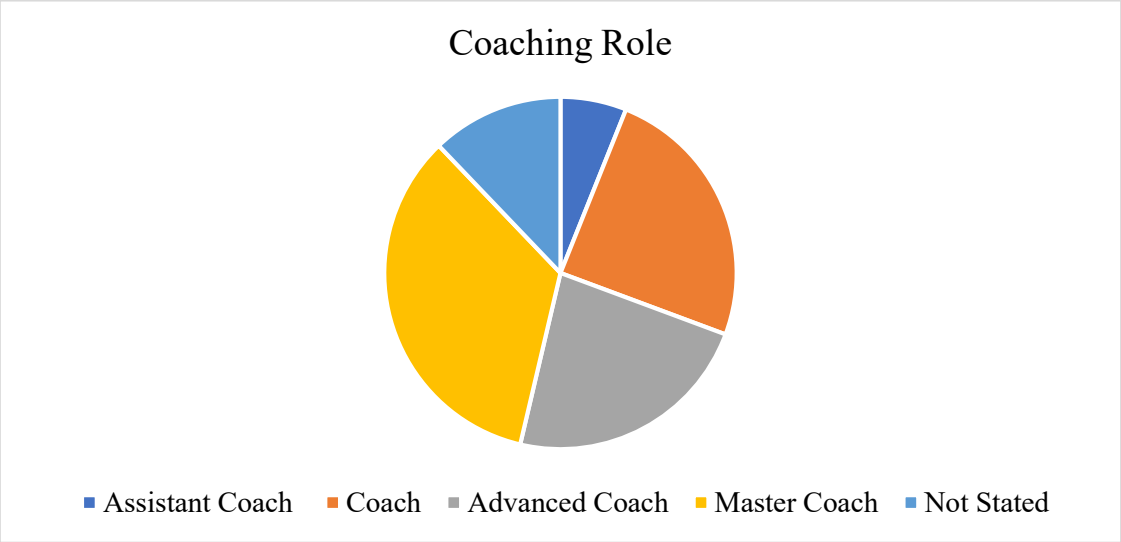


Figure 1: Coaches Role

The majority of participants who completed the online survey were representative of a volunteer population. This is represented in Figure 2. Specifically, 36% (N=112) of participants were carrying out their coaching roles in a volunteer capacity. 25% (N=79) of participants were employed as full-time members of staff, and 17% (N=53) of participants considered themselves as part time staff. 21% (N=65) of participants were paid for the delivery of coaching sessions on a sessional or daily rate basis.

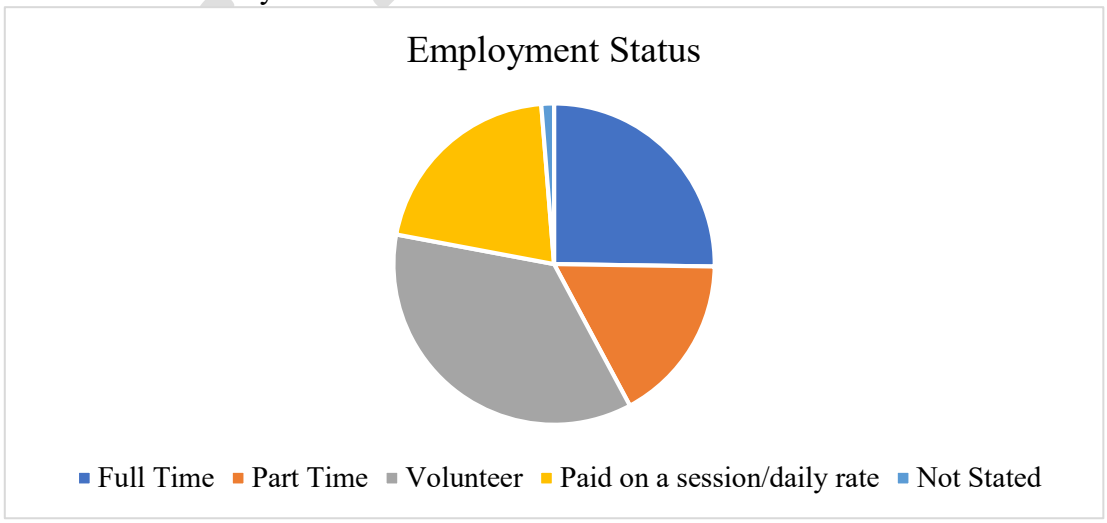


Figure 2: Coaches' Employment Status

Figure 3 represents the income of participants in relation to the National Salary in their respective Countries. 41% (N=129) of participants are earning below their Country's national salary, 24% (N=76) of participants are earning equal to their country's national salary, whilst 9% (N=27) are earning below their Country's national salary. 25% (N=27) of participants did not answer this question.

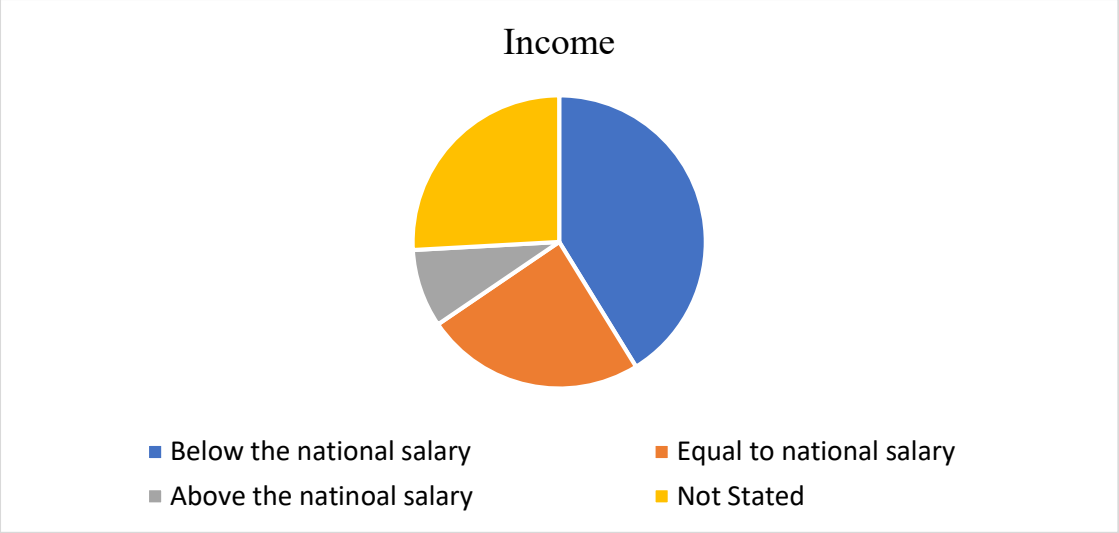


Figure 3: Income of participants in relation to the National Salary in their respective Country

8.1.3 Qualifications & Coach Education

Within the online questionnaire, participants were asked questions surrounding their educational background and coach education. The results presented below provide the reader with insight into the highest level of qualification participants hold and whether participants are currently engaging in any further educational qualifications. Following this, insight into participants coach education is provided, with specific reference to qualifications, and Para coaching qualifications. Participants were also asked if they had engaged in Continuous Professional Development (CPD), and for their perceptions on the most effective form of CPD.

6.1.4 Education

We used the European Qualifications Framework (EQF) to guide the categorisation of participants highest level of qualification (Table 3). Results are outlined in figure 4. Specifically, 6% (N=19) of participants were educated to Level 3, 22% (N=69) of participants were educated to Level 4, 29% (N=92) of participants were educated to Level 5. This was the most common level of education. 15% (N=47) of participants were educated to Level 6, 13% (N=42) of participants were educated to Level 7, and 8% (N=25) were educated to Level 8. 6% (N=19) of participants did not answer this question.

18% (N=56) of the 313 participants were currently undertaking qualifications. 78% (N=240) were not completing qualifications and 5% (N=17) of participants did not answer this question.

Level	Description
3 4 (secondary school equivalent education)	Factual and theoretical knowledge in broad contexts within a field of work or study. A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study
5 (further education equivalent, following secondary education)	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge. A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems.
6 (normally a completed Batchelors Degree or Equivalent)	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles. Advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study.
7 (Masters or Equivalent)	Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research. Critical awareness of knowledge issues in a field and at the interface between different fields. Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields.
8 (PhD or Equivalent)	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields. The most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice.

Table 3: European Qualification Framework for categorising Levels of Academic Education

Results

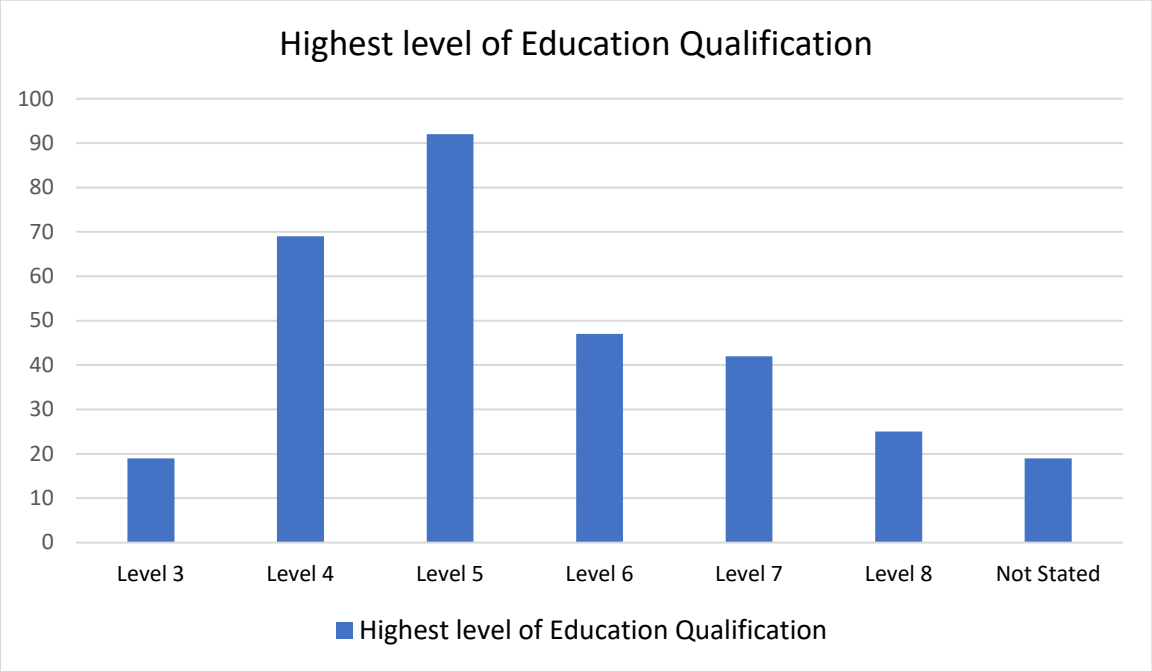


Figure 4: Highest level of qualification that coaches hold

6.1.5 Coach Education

Results of the different levels of coach education are presented in figure 5. Specifically, 56% (N=175) of participants held a National Coaching Qualification from a Sports organisation, 31% (N=98) did not hold a National Coaching Qualification, and 13% (N=40) did not answer the question. The name and level of the qualification that participants held varied and is illustrated in figure 5. Specifically, 3% (N=10) of coaches held a Level 1 qualification, 7% (N=21) of coaches held a Level 2 qualification, 9% (N=28) of coaches held a Level 3 qualification, 4% (N=13) of coaches held a Level 4 qualification, 2% (N=7) of coaches held a Level 5 qualification, and 1 coach held a Level 6 qualification. Other qualifications consisted of Trainer status (N=36, 11%), degree (N=8, 2%), and certification (N=5, 1%). 59% (N=184) of participants did not answer this question.

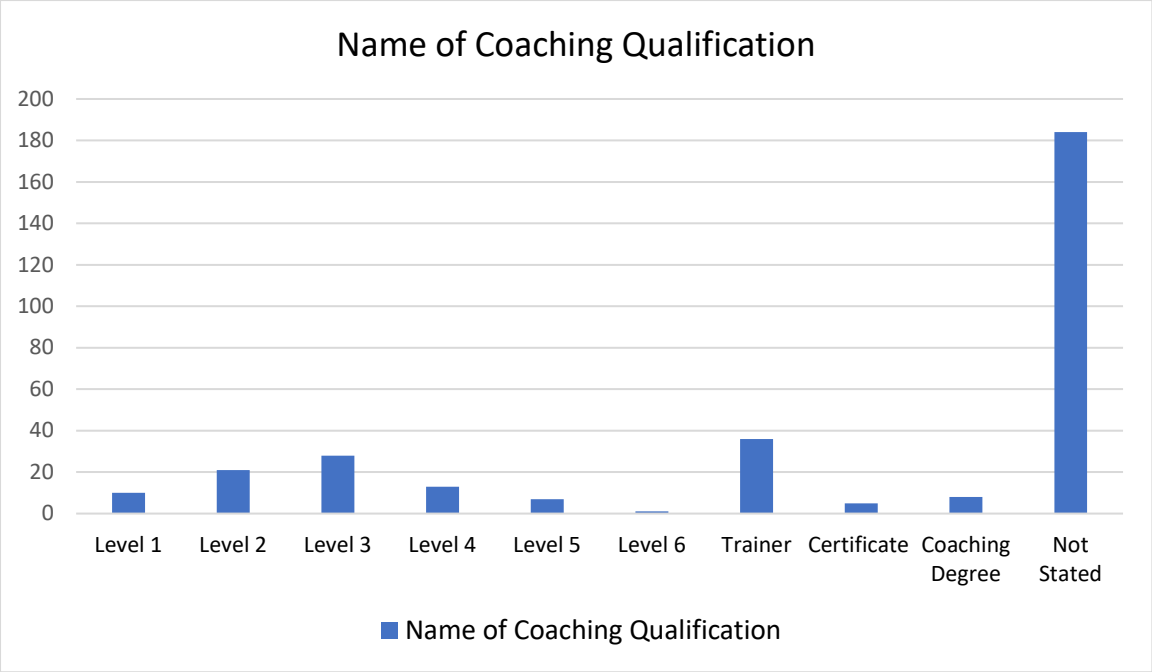


Figure 5: Coach Education Qualifications

With regards to Para specific coach education, the results illustrated in figure 6 highlight a lack of bespoke para coach education. 81% (N=254) of participants either stated no or did not answer the question in relation to the provision of para coach education. 19% (N=59) of participants stated that they had received coach education in relation to Para coaching. Forms of education were inclusive of: sport specific *workshops, provision included within 'mainstream' coach education, Level 1-4 qualifications, and Paralympic courses.*

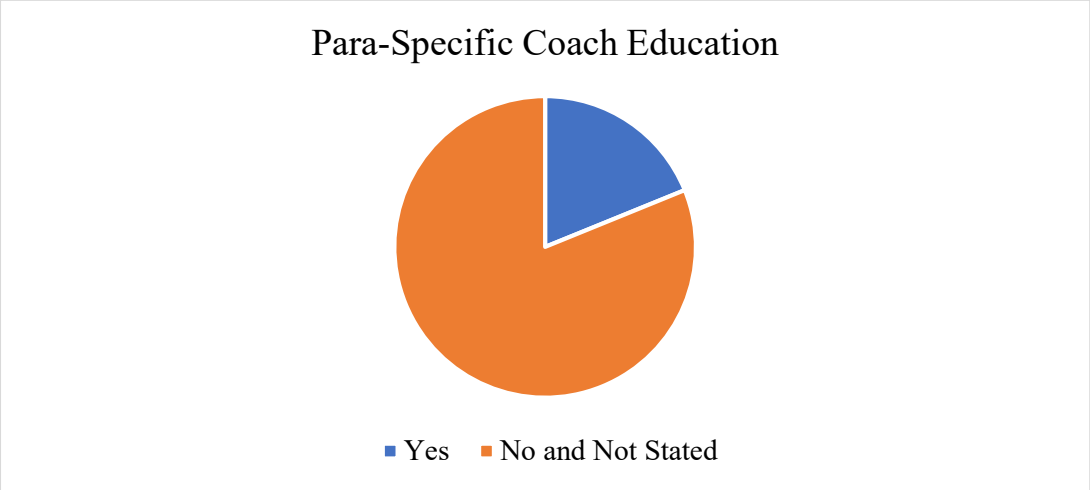


Figure 6: Para-Specific Coach Education

67% (N=210) of participants had engaged in CPD since they began coaching, whilst 27% (N=83) had not, 6% (N=20) did not provide a response. In the past 12 months, 56% (N=175) of participants had engaged in CPD, whilst 38% (N=120) had not. 6% (N=18) did not answer this question. Of the CPD opportunities, 32% (N=102) of coaches advised that the CPD was relevant to coaching athletes with impairments. 57% (N=178) of participants highlighted that the CPD they had engaged with was not in relation to coaching athletes with impairments. 10% (N=33) of participants did not answer the question.

Figure 7 outlines the different types of CPD participants have engaged with. Specifically, the most common forms of CPD are *Workshops/Training Event/Course (N=196)*, *Coaching Conferences (N=151)*, and *Observing/Working with other coaches (N=150)*.



Figure 7: Coaches' identification of different types of CPD opportunities

The most effective form of CPD is presented in figure 8. Participants rated Informal Learning (42%) as the most effective form of learning. Non-Formal learning was rated second (31%), and Formal the least effective (27%).

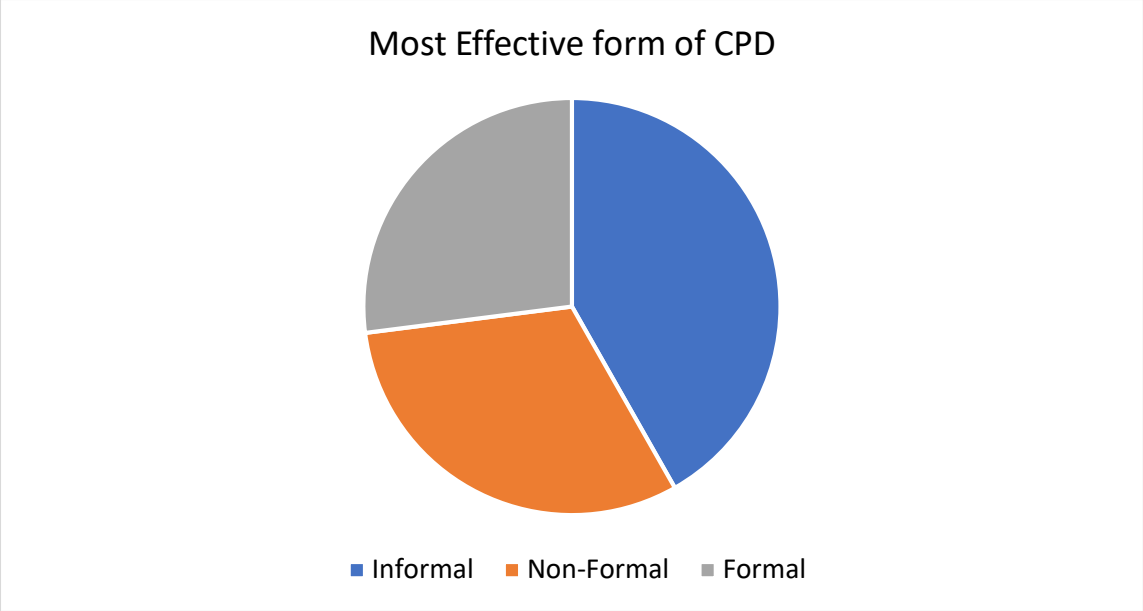


Figure 8: Coaches' perception of the most effective form of CPD

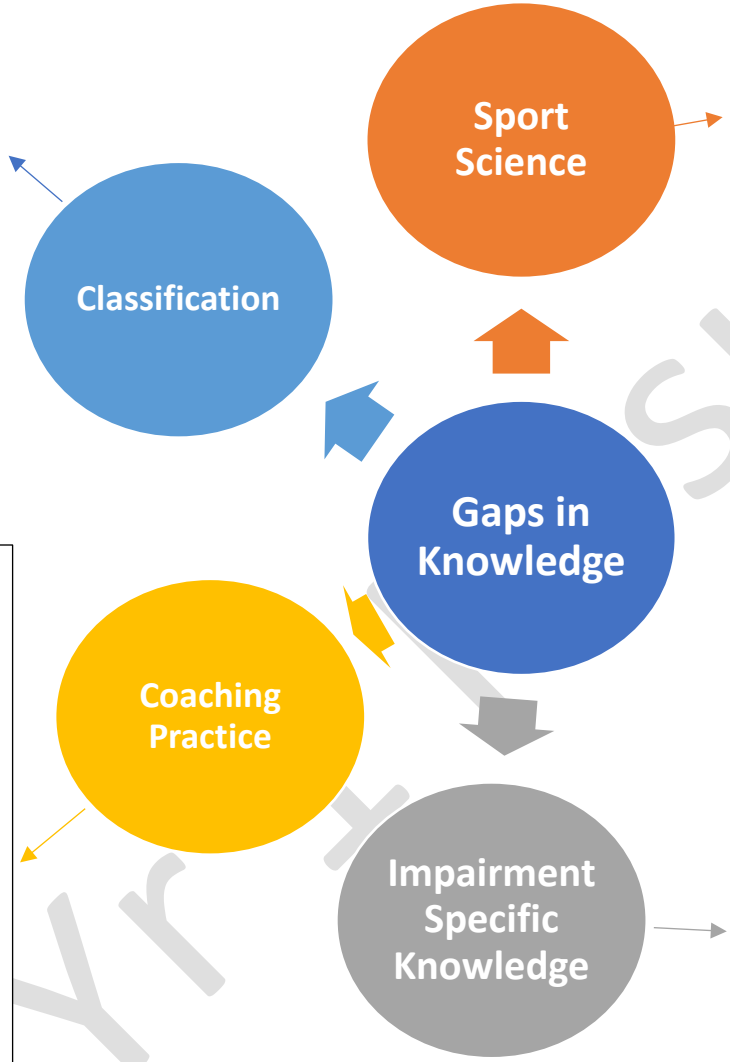
6.1.6 Gaps in Knowledge

From analysis of the open ended questions, participants felt that they needed support in the areas of *Sport Science (N=90)* consisting of information relating to: Biomechanics, Strength & Conditioning, Physiology, Psychology; *Impairment Specific Knowledge* (N=36), consisting of: general knowledge improvement, types of disability and the impact that has for sport, rehabilitation; *Coaching Practice (N=29),* consisting of information relating to: technology in sport, adaptive and innovative training, inclusion, planning, best practice*; Classification (N=11)*, consisting of information relating to classification types, signposting of events and competitions, sport-specific classification.

In the conceptual map presented below, there are a number of quotes extracted from the data that explain coaches' perceptions of the above gaps in knowledge.

Co-funded by the Erasmus+ Programme of the European Union
ICCE International Council for Coaching Excellence
NOC*NSF Netherlands Olympic Committee Netherlands Sports Confederation
European Paralympic Committee
INSTYTUT SPORTU PAŃSTWOWY INSTYTUT BADAWCZY
Hungarian Paralympic Committee

"Classification of training in various types of disabilities (indications and counter-indications)"
"Signposting to the different types of competition available to S14 or Learning impairment and exactly how far those routes can take a swimmer"
"Knowledge of the competing opportunities for people with impairments."



Biomechanics
"Ranges of movement in some diagnosis"
"Biomechanics"

S&C
"How to train people with disabilities"
"Individualization, periodisation of training in given diseases"
"Preparation (method, forms, training intensity and volume application and measurement); training planning; training monitoring; sports"

Physiology
"Anatomical analysis of the movement of a given sport and muscles mainly responsible for sports success"
"Different physiological indicators for the different impairments"
"Motor/neurological control"

Psychology
"Mental preparation of athletes"
"Psychological aspects of working with disabled athletes; psychological motives for physical activity"
"Communication / Social Factors Mental Health First Aid Signposting for help"

"Deepening of coach knowledge in the field of technological and training innovations in a sport of the disabled"
"Inclusion in a normal class"
"Different methods to teach/coach different impairments"
"Inspiring examples of other coaches"
"How to deal with a role of both coach and care taker - How to coach a player and his/her relative who is co-participating in the sport"
"Coach Philosophy"

"Types of disability; the specificity of the sport of disabled people; similarities and differences to the sport of able-bodied"
"Specificity of different disabilities; possibilities of athletes with different disabilities"
"Types of impairments and the limitations applied within the sport"
"Specific things of any impairment group and then how to coach them"

Co-funded by the Erasmus+ Programme of the European Union

6.1.7 The Athlete Population

Participants tended to work across age groups. Specifically, 35% of participants worked with young people under the age of 19, and 65% of participants worked with adults over the age of 19. 21% of coaches (N=65) worked within the high performance domain, 5% (N=16) worked within the talent domain, 27% (N=85) worked within the community domain, and 44% (N=138) worked across multiple domains. 3% (N=9) did not respond.

We used the IPC classification categories to establish the athlete population.
Participants appear to be working across athlete populations, which is evidenced in figure 10. Specifically, 58% (N=172) of participants work with athletes who have impaired muscle power, 42% (N=124) of participants work with athletes who have impaired passive range of movement, and 47% of participants work with athletes with limb deficiency. Further, 31% (N=92) of coaches work with athletes with leg length difference, 19% (N=56) of participants work with athletes of short stature. 36% (N=107) of participants work with athletes who exhibit hypertonia, 35% (N=105) of participants work with athletes who exhibit ataxia, and 25% (N=76) of participants work with athletes who have Athetosis. Lastly, 36% (N=108) of participants work with athletes who are visually impaired, and 50% (N=149) of participants work with athletes with an intellectual impairment.

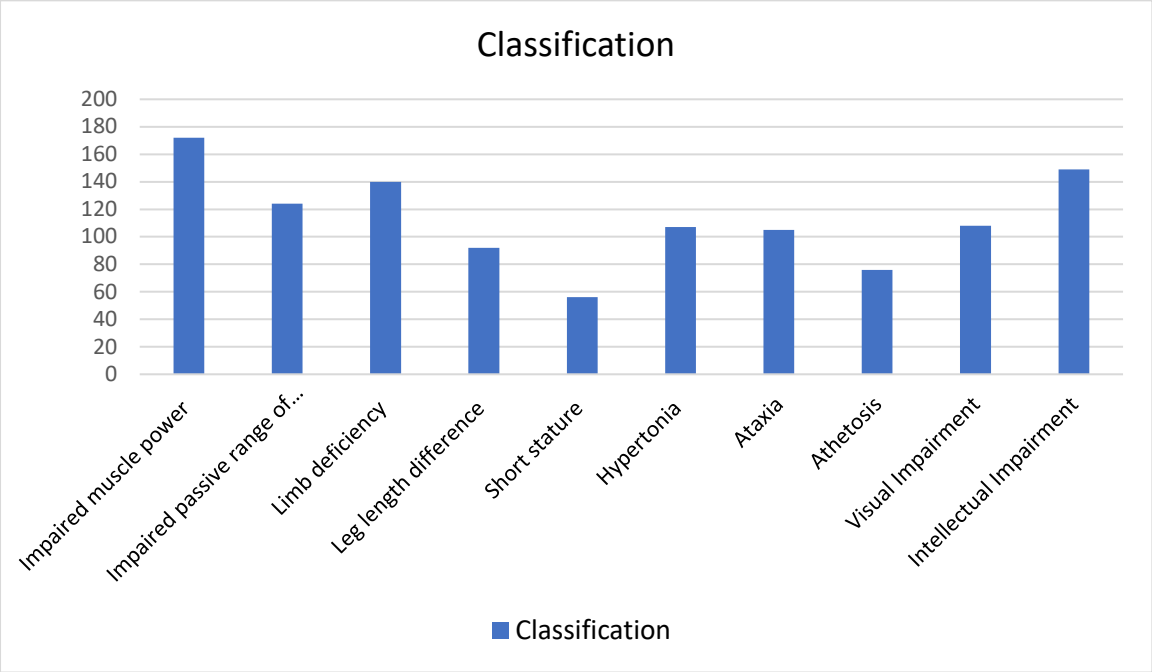


Figure 9: Classification of athletes

Of the athletes that coaches worked with, 142 coaches worked with at least 1 athlete who used a wheelchair.

205 participants made no reference to their athletes using assisted technology (represented by answers of: No, Not applicable, and Not Stated). However, 108 participants outlined a number of ways in which their athletes used assisted technology. These included: *Leg brace, blades, wheelchair, throwing implant, sport equipment, ramps, guide runner, prosthetics, raises in shoes, lift.* The most common type of assisted technology was a wheelchair (N=26).

Participants were asked if their athletes had any secondary medical conditions, 39% (N=121) of coaches responded with 'No', 36% (N=112) did not answer the question, and the remaining 25% (N=80) advised that their athletes had secondary medical conditions. Secondary medical conditions consisted of: *heart problems, lung problems, diabetes, epilepsy, autism, visual and auditory problems.*

56% (N=175) advised that their participants did not need additional assistance, and 12% (N=38) did not answer the question. However, the remaining 32% (N=100) highlighted that athletes need additional assistance in the form of: *guide dogs, guide runners, carers, personal coaches, volunteers, loaders, wheelchairs, interpreters, sticks.*

Summary

In this section, we described key information gleaned from the online survey. The report specifically details information relating to Coach Demographics, Coach Education and Qualifications, Gaps in Knowledge, and Athlete Demographics. The next section elaborates on the information obtained from coaches from the online survey through analysis and findings of the follow-up interviews.

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6.2 Phase 2: Work force audit qualitative findings

The following categories and subthemes were generated from follow up interviews with coaches who had completed the survey and had agreed to take part in a further interview to elaborate on their experiences as a Para Coach. Table 1 shows all the categories and sub themes that were generated from these interviews.

Table 1. List of categories generated from the analysis interview data

Categories		Sub themes
1.	Serendipitous Entry Pathways	As a coach/volunteer As a referee As an athlete Personal Experience
2.	Coach Philosophy and Disability	Person-Centred Connection Integration Participation Cultural Able The same
3.	Coach Education and Learning	Formal and non-formal coach education Learning from other coaches Learning from experience Learning from athletes
4.	Gaps in Coach Education Provision	Sport Science support Knowledge of impairment and classification Knowledge of coaching pedagogy and adaptation
5.	Perceptions of 'Good Coaching'	Open and honest Enjoyment and athlete centred Athlete Accountability Integration and Inclusion
6.	Adaptations to coaching practice	Knowing and adapting to the athletes impairment

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6.2.1 Serendipitous Entry Pathways

Throughout the follow up interviews, participants revealed that they entered into the world of disability coaching in a variety of different ways. Most were primarily coaching within a non-disability setting and then either volunteered or were asked to work with disabled athletes. Some entered the para sport context due to a personal connection with an individual who had a specific impairment. Below are a number of illustrative quotes.

As a coach/volunteer:

It was evident in a number of interviews that some participants had entered into disability sport through previous coaching and volunteering. For example, participant one explained how she was involved in hockey as a volunteer coach before discovering Boccia:

> P1: I was very involved in hockey before I was working in disability sports. I volunteered. I was a county coach and things. I guess there's always been that passion for what else can I do? What more can I do? What more can I help other people to do? That interest and desire has always been there. I guess it just takes a slightly different form but essentially, they are all people playing sports.

Furthermore, participant two alluded to how he coached non-disabled tennis prior to coaching wheelchair tennis later in his career:

> P2: My coaching background is in tennis. I was a qualified tennis coach since the age of 19. I used to work in [UK] parks and we used to do a buy one get one free type of lesson. That's where I met my first para athlete because she booked a lesson and wanted to have the second one straight afterwards.

As a referee:

Given the varied nature of how coaches entered into coaching in a disability setting, participant three described below how he was a referee within mainstream volleyball prior to being involved in sitting volleyball:

> P3: How I jumped into it, I was a volleyball referee. Let's say normal volleyball but, also, sitting volleyball is normal volleyball. I was a young referee in [Baltic Country]. Then in year 1991, I think, or 1992, they were looking for a referee for the sitting volleyball, and so, volleyball federation has chosen me to be the candidate. I travelled to [EU Country]. I was there 10 days, and I made my international sitting volleyball referee course, and then I was 10 years referee by the contract. Being with disabled people, then I was slowly, slowly deeper and deeper in.

As an athlete:

From the follow-up interviews it was also evident that some coaches began their disability coaching career through their athletic involvement, for example participant four below explained how he was a guide runner:

> P4: I've been in disability athletics or para-athletics since 1995 where I began as a guide runner with the blind middle distance athletes and then continued to support the athletics club that I was out with which was a disability-specific athletics club in [UK]. I helped out there and then through different jobs and remits set up when I moved to [UK City], essentially a pan-disability or a pan-impairment athletics group as part of [UK City] which evolved into more of a learning disabled group over the years and

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then specifically more into Special Olympics and the groups around the city that were linked to that.

In addition, participant five below explains how he was an athlete prior to working in disability coaching, however, having a visually impaired child was his first experience of coaching a disabled athlete:

> P5: I always been training in Judo. I was starting Judo since when I was seven years old. I've been training for 42 years now. I think I know something about that sport. I was starting to be a coach when I was around 15 years old because we used to start at very early in [Nordic Country], and in Judo comparing with other sports. During my career as a competition athlete, I was also a trainer. When I got my first child 1991, I find out that [she] was blind, so I put her on a judo mat when she was one week old.

1. Coach Philosophy and Disability

During the followup interviews, participants provided insight into their differing coaching philosophies. However, the majority of coaches found this question quite challenging, despite this, coaches highlighted that they predominantly engaged in person-centred coaching. In addition, some coaches believed that it was important to *connect with* and *integrate* participants as part of their coaching practice. Lastly, for a small number of coaches, an integral part of their coaching was to enhance participation of disabled people in sport. These themes are exemplified in the coaches' excerpts below and can be found within some of the Best Practice Case Studies (BPCS) further described in this document (see Section 7.0).

Coach Philosophy

Person-Centred:

> P6: Every player has a little bit different disabilities. A little bit different even if they are without leg. It depends how, where they are without leg. Then it's very, very difficult if they are left-handed or right-handed, or this is left leg or right leg. The position when each player can play is unique. You must work individual with everyone, so we have many individual trainings. Of course, you must consider them as individuals because even if they are equal with the disability without leg, equal without leg, is depends how flexible you are, how can you sit. Everybody is so unique that you cannot find two that can play in the same system because sitting is very- this is position, this is not natural. To sit is not natural, so you have problem, or you must find to sit as we sit during the play. It's not natural position. You must find the best how everybody can sit. We sit first because these are our legs to sit.

> P5: They say yes, yes, but they don't really understand. When you're working together, they really understand, and sometimes, of course, they're making a lot of wrong things. It's a lot of techniques. You can't go when you're pulling your opponent, that is impossible. Then we can have a discussion. Why do you think that I don't agree with this? They're thinking. That is my philosophy. I want to have discussion, so they really understand with their mind about what is correct or not correct.

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P7: I help people achieve their own excellence. It is like main things, main idea. To build courage, to build independence through the athletes. Give them the tools to achieve their own goal.

Connection:

P8: I see it as a social environment, a social connection and too for persons to be connected, not only from different social backgrounds, not only from different economic backgrounds, not only from different history or cultures, but also from the inside of each person, not social, but an individual thing. It's like a way of persons to be entirely connected, that's how I see sport and specifically sport for persons with disability.

Integration:

P10: I teach in the same way, because staying together, I think they have to learn to stay together. I don't want to create differences between normal students and students with disabilities. We stay together, and we teach in the same way.

P8: My main philosophy, my main goal is to have full participation for citizens with disability inside the sport system, I do not want to have them just as athletes, I do not want to have them just as coach, I want to have them entirely inside the system as managers, as coach developers, coach facilitators, as collaborators, physiotherapists, medical staff, everything in all the fields. I don't know if that's the question that you were making.

Participation:

P6: For me, it's very important that everyone can do some kind of sport. I think also when you're disabled mentally or physically, it should be normal to do something you like. Of course, because I play volleyball, I'm especially interested in volleyball for disabled. Anyhow, I think, for me, it's very important that everyone can participate.

Perception of disability

Throughout the follow-up interview process it was evident that participants held multiple and contrasting perspectives on disability. Specifically, disability was perceived from a *Cultural,* or *Ableist* perspective whereby disability is understood in relation to able-bodied ideals. Furthermore, some coaches did not perceive there to be any difference between athletes within an impairment and able-bodied athletes.

Cultural:

P3: Because disabled bodies you can see still here in [Baltic Country], many doctors, medicines they think that disabled kids should be at home. Come on, and this is so big

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problem here because the thinking is wrong. We really want to show, look, what these kids can do and how you can prepare them to play sport.

Able:

P8: I started to have a view not evaluating the condition, not evaluating the difficulty that the person had or the evaluation of the disability or condition that the person had. I started to develop a more wider and more futuristic, broad view to pass over that limitations. That was the activity or the situation that made me bursting to work with persons with disability, not seeing the condition but practicing the possibility to help that person go over the obstacles.

No difference

P9: There is no difference between para-sport and normal sport. They are same people. In our example for cycling, they have different bikes, but there is no difference between normal athletes and the para-athletes. That's my message for everyone that we talk to. You can say if we go to a competition, if the club is afraid to have parasport involved at the same time as normal sport, there is no problem. That's my issue. There is no problem.

2. Coach Education and Learning

Participants reported that they had experienced some level of coach education through both formal and non-formal modes since they started coaching disabled athletes. However, the most prominent mode of development that coaches identified was through working with other coaches and learning from experience. Some coaches noted that they had developed knowledge from the athletes themselves.

Formal and Non-Formal Coach Education:

Coaches throughout these interviews explained how they had attended formal and non-formal coach education; however, some had attended more than others and had different experiences. Participant four and five below explained how the formal coach education they attended was basic, but perceived to have value:

P4: With the formal qualifications, that kind of has allowed me to want to, just get some basic knowledge of coaching and qualifications and then each level that I've done, that's expanded that knowledge and tested my own understanding in greater depths.

P5: Well, you actually may say so that in the beginning on the lower level of coach education I thought that after each level, I have a lot of information and that was all the information as was possible to have. It was no more information to give but after the last education, I can say that was a tool that you can always get more information from different places.

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In addition, participants two and four also discussed the role that non-formal education had played in the development of their coaching practice. This non-formal provision consisted of conferences and workshops:

> P2: I went on a lot of courses with schools and the National Institute of Sport [UK]. Because I was in a national coach position, I was able to access that for free. I did a UK sport conference every year and for six, seven years so that meant that there were speakers from all over. Different sports whether it's disabled or non-disabled. The sport course [in the UK] that was for three years was great in terms of coaching philosophy and me as a person.

> P4: The coach development stuff then has really helped me with regards to some areas of specific interest. There was some work that [UK Sport Governing Body] did around [disability sport specific event] and then put a series of coach development workshops on. That was really useful at that point in time for me with regard to where I was as I had only being involved in the sport for a few years. The development workshops have allowed me to think outside the box a little bit. I went to a [UK] conference a couple of years ago where I chose strength development for javelin throwers workshop and I spoke with the person who was delivering who's a well-renowned coach, to explain why I was there and what I was doing because everybody else was javelin throwers. I wanted to see what commonality there was in the strength development of a javelin thrower compared to the para sport I coach and there was loads. It was really useful, so it's those types of things that have really helped me to explore more, and again be more creative with regard to the training that we do.

Whilst coaches often value non-formal education, in the example below, participant one noted how the topic and duration of these courses are not always beneficial:

> P1: When you go to courses, finding out what other people are doing, that really helps as well. I've been on some courses where they're so light touched that they didn't tell me anything I didn't know. That sounds awful. It sounds like I'm a know it all and I'm not. But, actually they were just- a two-hour course on inclusion isn't going to cut it, or on disability, whatever, people try different things, address different parts of what's needed.

Learning from other coaches:

Learning from other coaches was one of the most prominent means of education for these coaches. Participant four below explains how he sought out other coaches to observe and learn from:

> P4: I spoke with two other coaches just to see what was going on with the camp. I wanted to be involved and to question them. They were really open to that, which was great for me, because then it gave me the opportunity just to ask questions, to gain an understanding, a greater depth of understanding of what they were doing and why. They were really open with that, and that was one of the few times that a coach has been so open with regards to philosophy training principles purpose.

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Participant one below reiterates this approach to learning, however he also discussed how she 'bounced' ideas around with her assistant:

> P1: It's always really good to talk to other people about stuff. I've been very lucky that when I was teaching, for instance, I had a teaching assistant that worked with me a lot of the time. We were able to bounce ideas off each other; we were able to discuss things, which was good as well.

Speaking with different coaches and learning from different sports was also value by participants two and five:

> P2: I really liked looking at other schools when I went around, the courses on the elite program, I had a triathlete coach, he worked with [elite athletes], so I got to see them training. They had Taekwondo, there was sailing. It was nice to see the other sports and some were Olympic sports some were Paralympic sports and it was nice to see how the sports crossover every sport had the same issues with athletes, different sports, different technical problems.
>
> P5: I'll be speaking with different coaches. I think actually that is the most way I'll say I get that information"

Learning from experience:

Like the wider literature on coach learning which details experience as the primary mode of learning for coaches, for participants in the Para sport context learning from experience was a very prominent theme throughout the interviews. When asked about how they have learnt, the coaches stated how learning from their experiences and their mistakes has shaped their coaching through a process of trial and error. This process was evident in the following quote:

> P1: One of the things I've benefited from hugely is [the fact that] I was working with such large numbers of people with disability. We had 300 across our school and college and obviously, that's new people coming in all the time. My experience of working with people with a range of disabilities means that my trial and error might now be less than somebody else's because I've probably met someone who looked a bit like the person I'm working with now and these things worked for that person, so they might work for you. Whereas actually you get somebody in with a completely new and different set of needs, then I've got lots of different solutions to work from. But I wouldn't necessarily know which solutions to try first.

Indeed, coaching experience was perceived as the primary source of coaching knowledge for many participants:

> P10: What I know is what I learned and so only with experience and with my experience in the national team.

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Other coaches, through personal connections to disability engaged in a continual process of learning from experience:

> P5: Well, I think because that my girl, my daughter, she's blind so you may say that I've been training on her the whole time. Then she's very honest to me that, "Oh daddy, you can't do so or so, you'll have to do that.

Learning from athletes:

Learning from their athletes is something that is very closely aligned to the sub-theme above of learning from experience. However, coaches did acknowledge explicitly how learning from their athletes was one of the biggest sources of education. The coaches were clear that they listened to a lot of their athletes and at times the athlete was their main source of education, especially relating to the athlete's own specific impairment. Participant 10 explains how within his team, each member helped each other to understand their impairments:

> P10: Every disability is different. If you don't have a hand, you can learn how to move. If you don't have a leg, you can learn how to move without a leg. We help each other. In the national team is like this, we help each other because every disability is different. It's important to learn from the different disabilities how to move in the court. It's very important.

Further, participant five explained how it is important to ask for feedback from his athletes. This feedback impacted on how he improved and changed his practice:

> P5: I'm speaking with a lot of athletes. Both my own athletes and some other athletes, so that is how I get this information. When I'm training with other athletes from other countries I used to speak with them and ask how they're feeling and I give them a response on their questions because I think when I'll be speaking with a lot of other peoples from other countries that their coaches are not working in the same way as I'm doing. They're more like you have to do this and that. I speaking with them what do you prefer? Sometimes that is the first time that ever they have got that question. When I speak with other athletes I get a lot of information and sometimes I'm changing how about I am teaching also.

Participant 11 provided an example of how by observing one of his athletes over a number of sessions he had learnt how to interact with the athlete:

> P11: I have a boy who loves judoif I want someone to give a demonstration I'll ask him. He'd come out in the middle and do a demonstration, but he doesn't trust me. He will go with other adults, but he will not trust me. He has [Impairment] and cannot show me so I have to find a way out of it, because if I'm standing at the front and having them come show me their technique one by one he wouldn't come when I called his name. I learnt to put my hands behind my back, tuck them in my belt. He will come up to me, take hold of my jacket correctly, and he will do the technique. The minute my arms come out, he thinks I'm going to throw him. I'm still learning.

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3. Gaps in Coach Education Provision

Participants expressed a variety of different areas of knowledge and development that they need in order to improve as coaches working within para sport. Within this theme, disciplinary knowledge related to sport science was viewed as essential, with a need for this to be specific to disabled athletes. In addition, knowledge of impairment and classifications was something that was highlighted alongside principles of coaching pedagogy and learning how to adapt.

Sport Science support:

Sport science support refers to the need for education around psychology, biomechanics, physiology and nutrition. For example, participant four elaborated on how he would like to have a better understanding of nutrition in order to be more informed of supplements and food groups, which can aid his athlete's development:

> P4: The nutritional stuff. One of the athletes that I'm working with is very small, doesn't eat a lot, really struggles to get all of the nutritional value from food that I think he needs. He's considered supplements and we've had numerous discussions with regards to a food first policy. I've spent a lot of time doing work with [National Anti-Doping Agency]. I understand a great deal around the risks associated with supplements and that it's a risk minimization of the use of the informed spot rather than risking eradication. We've had those discussions, but also then trying to get him to understand various different foods that will help him and not just Domino's pizza, because that's what the Brownlee brothers eat and those types of conversations.

Participant eight explained how he would like more education around physiological training and requirements:

> P8: The methodology issues of physiological aspects. Why should I have to have 10 series of one minute plus relax time? What kind of systems were working? Lactic system, products system, whatever.

In addition, Participant six expressed a more generic desire to develop knowledge around psychological training:

> P6: What, to me, is also important is more the physiological part because I think it's very important to know, especially when you're coaching people who are physically disabled.

Finally, psychological support was also identified as an area for coaches to integrate into their practice as described in the following quote:

> P8: Psychology also, the way a way to interact with the athletes itself, with the practices itself. How to improve the motivation of them, how to make them part of the system, how to make them part of the community and how to make them understand what the objectives of the session and what they could improve doing this over time and not only on that session itself.

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Knowledge of impairment and classification:

Unique to the Para sport context, the data suggests that knowledge of the impairment and classification was identified as an area of education needed for these coaches:

> P4: If I'm honest, I don't understand all of the various different impairments in the medical implications of those. Sometimes I really don't want to. When one of the athletes tells me that she had 30 seizures last week, then I get a little bit scared of that.

Participant seven explained that it is important to understand the impairment in order to understand the specific needs of the athlete and how it is different from 'able-bodied' sport:

> P7: Like classification, communication, understanding the disability, the social context, transportation, even nutrition. It is a lot of small differences, which able-bodied coaches doesn't value very well, like Paralympian coaches need to think about it. It makes sense.

Coaches discussed how generating a greater understanding of different impairments and their effects on athletic performance enabled them to individualise their practices:

> P11: The knowledge in this sport is how can you adapt the sport or techniques to an individual. How to adapt something to an individual or what can this individual do - or what they can't do. Everybody is different. You won't have two disabilities that are exactly the same. They vary in some stage or other.

> P2: If I'm talking specifically about disabled, it would be knowledge of disabilities but not enough that it scares you. Just having awareness of physicality of what they can do and what they can't do, what they don't think they can do and what they don't want to try.

4. Perceptions of 'Good Coaching' Practice

During the interviews, participants were asked to explain what 'good coaching' looked like for them in the context in which they practiced coaching. Responses centred around the following themes: *open and honest, enjoyment and athlete-centred, focusing on the process, athlete accountability,* and *integration.* Furthermore, coaches described the adaptations that they made within their coaching practice that enable them to better meet the needs of the athletes. Together these themes were consistent with athlete centred coaching.

Open and honest:

Some coaches described the relationships that they established with the athletes as being built on foundations of openness and honesty as explained by the following excerpt:

> P4: With regards to what good coaching looks like, for me is being open and honest with the athletes and empowering athletes to have a voice. I ask them a lot of questions. I don't ask how does that feel bit. I'll ask them very specific, but open questions. It gives

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me a greater understanding of what they're thinking and feeling, and a link to a little bit to the psychology of where they're currently at as well. Having open questions and being open with the group as well about what we're doing, why we're doing things, is another element for me about good coaching.

Enjoyment and athlete centred:

Creating a space for athletes to enjoy sport was also a key consideration across the coaching cohort. However, in the quote below there was an acknowledgement that sometimes training was not fun. Furthermore, in the case below not only was fun valued but also the coaches alluded to the need for athlete-centred coaching and meeting their individual needs through paying close attention, rather than focusing on a stop watch:

P4: One is that the athletes are enjoying what they're doing. I nearly said fun, but sometimes it's not fun when you're exhausted and about to throw up. Still, it's an enjoyable environment. It caters for the needs of each of the athlete-centred bits. Good coaching is that you're observing each of the athletes in the programs, support the development of each of those athletes and their individual needs. Good coaching for me is that then you are observing, you're observing the athletes and not just a stopwatch, or not even a stopwatch. That sometimes frustrates me when I see that.

Athlete Accountability:

Coach five explained how he emphasised accountability with his athletes. Specifically, he placed ownership on the athletes for their own development and success; this is something he deems as good coaching:

P5: Actually, what I think is very important and what else I'm working with very much is, that they must think about themselves because during a fight I can sit near the tatami, but I am not in the fight. That is also the same with nutrition, that they have to know what they should eat. I will never say it is forbidden to drink Coca-Cola or eating chocolate, but it's up to yourself because you are responsible for your body. It's the same with if you want to drink alcohol, not when you're out competing, but before. It's up to you but you can imagine that the person as you're fighting against they will not drink alcohol, so if you are losing, perhaps that was because you was drinking alcohol, you was not sleeping enough, you was eating wrong things, and you will never give them this free chance to win against you, but still it's up to you. I think that's a keyword for me that everything is voluntary, but you must know what you're doing.

Integration and Inclusion:

In the data were clear messages about inclusion and integration framing coaching practice. For example, in sitting volleyball, both athletes with impairment and able-bodied athletes can compete together, challenging ideas about disability. One coach explained:

P3: Sitting volleyball now, it's one very good team sports for everyone. You know why? Because this is only team sports you can sit and you are included. When I sit with the

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> kids without legs during the play, I am disabled because I have two legs. This is only the way I have to run away, so playing with the players without legs, we with two legs, we are disabled during the play. Everybody can sit, and we have now national competitions for everyone. Everyone is allowed to play. I cannot see when they sit, when they play. I even don't see who are abled or disabled bodies, they are were equal for me.

In addition, participant 11 provided an example of how he delivers integrated sessions:

> P11: With my mainstream coaches on the weekend, each participant is swapping partners with him [disabled participant] all the time, I didn't leave him out. I got him up and I got one of my mainstream to go with him and I told the mainstream this is what you're going to do. He was involved throughout the whole session. His parents came up to me and said, "Oh that was a great session".

5. Adaptations to coaching practice

Coaches were asked about how they adapted their coaching when working with disabled athletes. The main responses within this question were related to the importance of knowing their athlete, knowledge about the impairment, adapting, and being able to differentiate.

Knowing and Adapting to the athlete's impairment:

Knowing the athlete as an individual was deemed important for the coaches within these interviews. This referred to coaches understanding each athlete's individual impairment as a means of providing appropriate modifications and practices:

> P6: You know about the kind of handicap they have. Then you'll have to deal it, so you know either player who can sit for more than, let's say, 50 minutes, and then she'll have to stand up because of her back. You already played for 50 minutes. Take a little rest and then you can continue. That's more on individual basis because everyone has a different kind of handicap.

Understanding impairment provided a lens through which coaches could reflect on the accessibility of their coaching practice. For example, participant four below explains how all his athletes work on slightly different elements within his coaching session:

> P4: Tomorrow's session, as an example, is a sprint starts focus essentially. Which actually works for everybody, but they'll all be working on different bits of the technical aspect. Whilst they'll all be doing 30 meters, some of them will be looking at explosive start over those 30 meters, whereas others will just be looking at an even contact for the first couple of pushes. It allows me to differentiate within a bit of a structure because, again, it comes down to time and capacity of being able to write different training programs for different people. Then with regards to the various different impairments, I'll consider things like fatigue, for some of the athletes, and which ones would fatigue more than others because of their impairment. Things like coordination and somebody with-- one of the athletes with cerebral palsy, I look at

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> their coordination and the work that they are doing more than somebody who doesn't have cerebral palsy, and whose coordination actually isn't affected by their impairment.

In addition, participant nine emphasised the importance of understanding individual impairment when planning and delivering coaching sessions:

> P9: The thing that's important, of course, is when we are dealing with blind people or visually impaired, of course, then you cannot have lots of on the screen, so to speak, if you don't explain it. That's, of course, you have to do in a different way because if you have visually impaired people, you have to take that in mind that they are also there. You cannot bring on lots of pictures on the screen.

Further to these examples, participant 11 provided insight into an adaptation made by referees within his sport:

> P11: When the referee gave a score, he went up to the participant and drew on his hand with his finger – like a signal. Now that person had an intellectual impairment, he could not hear and was totally blind. What the referee was doing was writing his score, and his opponents score. He could now understand that he was three points behind. That is how things can be adapted for everybody.

Participant five also explained how although two athletes may have the same impairment, they still need individualised support and coaching according to level of participation and age:

> P5: They [athletes] were working in different ways because I have two blind person. One, my daughter and one boy and they want total different things. [My daughter] she's on a very high level, she doesn't need perhaps as much information. Sometimes I'm more like her eyes. However, compared with [another athlete], I have to give him more information about what you should do because of his age.

Summary

In this section we outlined some of the key findings from the qualitative data. The report details the coach's entry into Para coaching roles, provides an overview of the coach education landscape of Para coaching and its impact on the workforce, and details core features associated with coaches' perceptions of good coaching practice across different Para coaching contexts. The next section provides further depth to an understanding of coaching practice in the Para sport context.

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6.3 Phase 3: Best Practice Case Studies

26 case studies were conducted with coaches, coach educators and policy makers across Europe in both mass participation and high-performance contexts. The case studies also explored coaching practice with athletes who have a range of impairments including those classified and non-classified, physical and cognitive, visible and non-visible. Details of the sample are available in Table 2. For brevity and clarity, the findings of the case studies have been synthesised into five themes; Spectrum of Integration in Coaching; Technology and Innovation; Integration in Coach Education, Advocacy amongst Policy Makers; Wider Benefits for Participants. Each of these themes will be introduced, explained and evidenced with narrative illustrations in the following section

Table 2. Sample Characteristics for the Best Practice Case Studies.

Case Study	Country	Sport	Position	Domain
1	UK	Athletics	Coach	Performance
2	Netherlands	Para-Shooting	Coach	Performance
3	Netherlands	Para-Shooting	Coach Educator	Performance
4	UK	Swimming	Coach	Performance
5	Netherlands	Football	Coach	Performance
6	Netherlands	Various	Policy Maker	Participation
7	Sweden	Various	Policy Maker	Participation
8	Norway	Various	Policy Maker	Participation
9	Netherlands	Football	Coach	Performance
10	UK	Various	Policy maker	Participation
11	UK	Para SnowSport	Coach	Performance
12	Ireland	Various	Policy maker	Participation
13	Ireland	Boccia	Coach	Performance
14	UK	Athletics	Coach	Performance
15	UK	Athletics	Policy maker	Participation
16	UK	Power Hockey	Coach	Participation
17	UK	Swimming	Coach Educator	Participation
18	UK	various	Coach Educator	Participation
19	UK	Archery	Coach	Performance
20	Netherlands	Wheelchair tennis	Coach	Performance
21	Netherlands	Athletics	Coach	Participation
22	Netherlands	Various	Policy Maker	Participation
23	UK	Football	Coach	Performance
24	Hungary	Taekwondo	Coach	Performance
25	European	Sitting Volleyball	Coach Educator	Performance
26	UK	Sitting Volleyball	Coach	Performance

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Theme 1: Spectrum of Integration in Coaching

Across the case studies, coaches described the integration[1] of athletes with and without disabilities as a 'highlight' of their work. For these coaches, integration brought numerous benefits. For the athletes with impairments, integration often provided a sense of increased self-esteem, and opportunities to compete with athletes who may be at a higher level. For athletes without disabilities, interviewees reported that integration provided a new awareness of disability and a new appreciation of athletes with impairments. That said, not all interviewees shared a uniform conception of integration. For some, integration included becoming more visible within a wider club or community. For others, integration included training and competing with athletes without disabilities. Furthermore, participants recognised that there were benefits to bespoke segregated sessions for some athletes with impairments. Thus, although integration is seen as a best practice, in different contexts, integration can manifest in different ways. Two of these scenarios are outlined below:

Scenario 1: Segregated training within an integrated football club

> In a case study of coaching in football, one particular coach described his volunteer work in a large 'grassroots' club with 1000 members. Until recently, the club had no members with an impairment. In response, the coach established two new teams with a specific focus on recruiting and engaging athletes with impairments. These young athletes have a range of impairments including Cerebral Palsy, visual impairments and autism spectrum disorder (ASD). The teams have been running now for four years, and the coach described how players always turn up early for sessions and there is a good social atmosphere. "Players turn up 30 minutes before the session and have conversations about their week; 'Hi, how are you doing? How was school this week? Have you seen Messi play?'" In addition to developing a social atmosphere, the coach describes how the ratio of 10 coaches (trainers) to the 30 children who participate is very beneficial; "some of the players need 1-on-1 support, the trainer takes the player by the hand and we do it together. This way, you see the players grow. Some people when you start cannot control a ball, cannot dribble, do not know the rules, they grow not only in their football skills, but they become more confident, become part of a group, they get happy when they score a goal. They are part of a team, and if they do not score it is the fault of the trainers. Everyone has to score, and everyone has to have the ball, and through these elements, everyone feels good, everyone feels part of a team and it is nice to go to the training".

Recruiting volunteer coaches can, however, be a difficult task and the ratio of one coach to every three participants in this particular club is an impressive achievement. The coach further explained how by simultaneously developing a segregated session, but integrating it within the wider club, helped to recruit members.

[1] Here, integration refers to the inclusion of people with impairments in mainstream or adapted forms of sport with able-bodied people. Integration is based on the principle of embodied diversity.

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> "Some of the coaches are 'sleeping members', they don't want to coach a regular team, but when we started they saw the smiles on the player's faces and wanted to be part of it. In the club, we have 5 fields and field 5 is by the roadway at the back and nobody can see you there. But I moved our team to field one, so when you go to field 1 or field 2, you have to pass our field. Parents and sleeping members saw the team training and came to us. They did not come to use for the prestige or the win, we do not get angry parents, it is just fun. All the trainers are members of the club, including first team players, and older players. They see the fun and the support and want to be part of that. If we play against a team and we lead 4-0, we switch our best players, so the other team can also score goals. We always try to get 5-5, 6-5, 7-7".

Thus, in this instance, there is a bespoke team with a clear emphasis on providing provision for people with impairments. By situating the training sessions on the front pitch, however, the team has attracted more coaches and is now more integrated into the wider club.

Scenario 2: Integrated training sessions in Taekwondo

> In a case study of Taekwondo, one coach described how they provided both segregated and integrated training opportunities for Paralympic athletes with cerebral palsy and athletes with amputations. Normally, the Para athletes trained separately to the able-bodied athletes, in an environment where the athletes felt comfortable and were not stressed because they were not being 'stared' at". For technical reasons however, two additional integrated sessions are provided each week where Paralympic and Olympic athletes train together. The coach explained "because I don't have a lot of athletes, and they are in different weight categories, we can't have enough quality training sessions. Participating in the able-bodied sessions allows us to work with people in appropriate weight categories and to experience different Taekwondo styles and skills. It is motivating to all of the athletes. It motivates the para-athletes as well as the able-bodied athletes. The able-bodied athletes looked at these people with no hands and it has motivated them a lot, and vice-verse. My para-athletes are also motivated to work extra hard because they are with the able-bodied athletes rather than their comfortable, safe and segregated environment".

Additionally, the coach described how over time, the able-bodied participants became more accustomed to the athletes with impairments and social interactions between the groups increased. That said, the coach retains two separate training sessions for the para-athletes with impairments because:

> "some para-athletes need more time to stretch, more time to practice specific movements, strengthen their upper body in other ways. Not with push ups or pull ups because of the amputations but in other ways. Every now and then, it is also good for them to have conversations about their impairments such as: 'this guy was staring at me on the bus, how would you advise me to do this or that in my daily life. So, we have conversations that we would not have in front of the able-bodied group. We do this in the segregated sessions. The sessions are a safe zone where they can relax."

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Once again, this scenario demonstrates the value of both integrated and segregated coaching sessions providing physical, social, psychological and technical benefits for athletes. Furthermore, the benefits of integration are not confined to athletes with impairments but are also experienced by able-bodied athletes. That said, both case studies also reinforce the importance of training sessions that meet the needs of athletes. Thus, it appears that integration can occur to greater and lesser extents. Decisions on how to integrate should be made with, and in the best interests of, athletes with impairments.

Theme 2: Technology and Innovation

Across the case studies, impairment appeared to be a disrupting influence that prompted coaches, coach educators and policy makers to innovate. In several cases, coaches have turned towards new developments in technology to support athletes. For some, this has enabled athletes to participate in activities that would not have been possible, and for other athletes it has enabled them to improve their performance standards. Two of these scenarios are outlined below from the perspective of coaches who were interviewed.

Scenario 1: Power Hockey – providing opportunities through new technology

> In 2000, a boy came to Greenbank Academy which is a Sports Centre in Liverpool, England. The boy had 'butterfly skin' and he could not participate in contact sport because his skin bleeds easily. This child would bleed frequently. He could play sport like Boccia, which is a great game, but it is a sedentary game and he wanted to be more active. At Greenbank, we said, "We can help with that."
>
> We asked ourselves, "What sport do kids play in school that they really enjoy?" We realised, "They play 'unihoc' in school which they love. It is fast, aggressive, active and played with plastic hockey sticks inside a basketball court." At Greenbank, we have developed the game of power hockey, which is a brand new game but is based on 'Unihoc'. We have developed chairs that allow you to shoot a ball by the press of a button. The chairs allow people who are severely disabled to play a contact game where they are able to fire a ball around.
>
> We invented the wheelchair that allows this boy with butterfly skin to play hockey. Initially it just had a bumper on the front, which pushed the ball along and had little springs to stop. Then it turned into a power hockey when we added an electric wheelchair. The chairs push the ball along, you can bump into each other to get the ball and to tackle someone. You can shoot the ball into the goal. You just press a button and a piston shoots the ball using the bumper. It is four players on each team and we play on a basketball court. It is a version of electric wheelchair hockey, a bit like bumper cars. Imagine bumper cars with a shooter on the front of it.
>
> Now, children with muscular dystrophy, cerebral palsy, and other disabilities play power hockey every week. Last night we had a boy with autism who started playing. It has done wonders for their self-esteem. It is great. We have brothers, sisters and family playing as well. For the boy who came initially, it was the first time that they have been able to play with their brother and sister on a level playing field. It is fantastic.

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ICCE International Council for Coaching Excellence
NOC*NSF Netherlands Olympic Committee Netherlands Sports Confederation
European Paralympic Committee
INSTYTUT SPORTU PAŃSTWOWY INSTYTUT BADAWCZY
Hungarian Paralympic Committee

Scenario 2: Technology in Para Shooting

> We have used technology to improve the last part (trigger pull) in shooting. It's about the movement you make in the last two tenths of a second before the shot. When you pull a trigger, it should be a slow movement. Too much pulling gives extra movement to your rifle. This is relevant for all shooters, but especially for one athlete who has muscular dystrophy and is not as stable as he could be. To help stabilize his posture, he uses a chair with some foam on it, and a lot of physical training.
>
> To test his performance, there is a camera device mounted on the barrel of the rifle and from our video, we could see extra movements in the last part of his shot. Then we had the correlation between the two data sources, the movement and the shot. In general, all our athletes' movement was unstable, and the shots were not good. In contrast, the opposition were nice and smooth. So, I developed a small computer program to calculate the data for myself because I come from an IT and electronics background. I am interested in programming, so I knew how to extract the data from the device. I made a spreadsheet and I told my colleague how it worked. I asked if he could use the program and then he entered the data from a lot of our shooters in this program. My colleague also had a lot of data from his shooters, so he entered that data also. Then we proved that my theory was correct. His shooters were better in the final trigger part of shooting than we were.
>
> So now we teach our shooters, "when you enter the centre of the target, you have to slow down your movement". It is like when you're driving your car, you are reaching the traffic light, and you see the traffic light just change to red, so you don't hit the brake all of a sudden but you're slowing down gradually. That also happens in rifle shooting when you are out of target, when you are in the centre of the target, you're pulling your trigger. Then as a coach, you can go back to your athletes and say, "Look, we know this now". But the athletes can also use the programme themselves. Because of our volunteer roles, we do not coach on a daily basis, but the shooters train on a daily basis. They can now use this analysis device themselves and they can interpret the data themselves and improve in that way.

Across both the scenarios, athletes' impairments prompted coaches to reconsider their practice. Both coaches used innovative technological solutions to meet the needs of individuals. In the first scenario, the child's impairment prompted the sport centre to innovate and provide access to a new sport; para-hockey. The centre was able to do this because of the technological development of the wheelchairs, the staff expertise, and commitment to inclusive practice. Today, power hockey continues to be played each week at the Greenbank Academy in Liverpool. In the second scenario, the coach drew upon IT and electronic skills to construct a software programme, analyse data and provide evidenced based coaching. Furthermore, the coach initiates pedagogical conversations with athletes through using this programme. Additionally, athletes themselves can now use the software independent of the coach. Thus, technology and innovation can be a useful means to enhance sport experiences for athletes with impairments. Importantly, a key caveat to this theme is that while these arrangements are

desirable, facilitating inclusion relies on appropriate financial investment and access to resources to enable participation.

Theme 3: Integration in Coach Education

Across the case studies, several interviewees argued for, and described instances of integrated coach education. The genesis of this argument lies in two observations. Firstly, integrating participants with impairments into mainstream coach education courses helps coaches to understand and develop more confidence in coaching athletes with impairments. This is very important, because many coaches will encounter athletes with impairments as part of everyday mainstream sport provision, and thus coach education needs to support them. Secondly, the interviewees argued that the process of understanding the needs of athletes with impairments and planning for these in coach education sessions helped developed valuable coaching skills that are relevant to all participants. For instance, working with athletes who are deaf may help coaches develop their non-verbal communication skills and this may benefit all athletes. To illustrate these arguments, two scenarios from the case studies are provided below. In the first scenario, a coach educator provides arguments for a bespoke disability football course. The coach educator argues that athletes with impairments should be a part of the course, and coaches can learn much through practicing and conversing with these athletes. In the second scenario, a coach educator describes integrating two disabled athletes into a mainstream swim 'teacher'[2] course. The coach educator explains how this experience benefitted the coaches.

Scenario 1: Integrating athletes with impairments into football coach education

> We have a Level II disability course of four evenings with practical sessions and theoretical sessions. I think it is important for every player if it's mainstream or disability, you should have an educated coach or a good coach. Now I am rewriting the course together with some experts. In the past, it was too much about football; on attacking, defending, counter-attack, and too little about disability. We changed that a little bit. We are still talking about football, but it is about disability football. The football remains because we are still on a pitch but now when we go outside for a practical session, we go out with a team of disability players. This forces us to talk about the background of the players and it is a wide variety because they can for example be autistic, have Down syndrome, or a physical disability.
>
> Ultimately, you are coaching people with disability who play football and in that order. You need to understand that as a coach and understand the player. We as coach educators have to teach coaches 'to learn their players'. You cannot talk about youth football and train with seniors. You cannot talk about disability football and learn with a mainstream team. It is about doing the practice with the people who are involved. Now we try to involve at least two groups of disabled footballers so that we get a wide understanding of disability. Then afterwards you have to bring the coaches and the participants together and share thoughts. "Okay, coaches what did you see? Players,

[2] Please note the coach educator uses the term swim teacher and coach interchangeably, but generally this refers to individuals who help teach people to swim rather than high performance coaching.

what did you see? Players what did you learn? Coaches, what did you learn?" We have to bring coaches and disabled footballers a little bit closer, so we can all learn together.

The course takes four days, so you cannot learn everything about disability football, but it is a helpful start and also relevant to mainstream coaches. In every mainstream team, there could be a player with autistic spectrum disorder or behavioural problems, learning disability, or people with high functioning CP. Hypothetically, one of the professional clubs under 14s will probably have some people with behaviour problems, or autism within their squad. The mainstream professional coach needs to understand this, as does the parent in the community club. So, for that reason, we want to bring athletes into the course.

Scenario 2: Integrating athletes with impairments into swim teacher education

From a swimming point of view, disability is not a major part of our mainstream coach education. We do make teachers aware that people have disabilities and additional needs, but we often talk hypothetically. For example, "if you do come across this, consider …", but there is no actual course requirement for those learning to be swim teachers to go and teach any swimmers with disabilities. I know that might be a logistic problem but there is no actual mandatory disability teaching during the course. This is strange because when they qualify the participants are 'signed off', and they can then be teachers that can go and work with disabled swimmers.

In the practical sessions we do have children on the swim courses and occasionally you might have a child with a disability. One time, we used an established swim school as participants. A boy with autism and a girl who was deaf were in the group. After the first day, one of the participants on the course went away and found out the basic sign language that you might use in swimming lessons. She came back with a handout to give out to everybody else on the course. It was an excellent example of learning about the participants and planning coaching to meet their needs. It really helped the girl who was deaf.

The little boy who was autistic didn't want to stay still or stick to lanes. We took the decision to put him in the main pool, so that he was contained a little bit, and we could get a bit more practice from him. His dad was there and was fantastic support. We had a conversation between, myself as the course coordinator, and the swimming teachers about handling children, non-verbal communication, safety, behaviour management and working with parents. The swim teachers learned more from their half an hour working with that one child than some of them will for the four days of the course. They have to think so quickly on their feet and be so engaging with him.

I think involving children with disabilities in coach education makes disability more acceptable. Trainee coaches or trainee teachers need to be adaptable and I think you can talk about it in a classroom, but the actual experience of working with children with disabilities is the thing that they will remember and learn from. This will have a positive effect for the swimmers or the children who are in these sessions, because teachers will be better prepared and more knowledgeable to include and cater for them.

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Across both the scenarios and other case studies interviewees argued that situated, experiential learning with athletes who have impairments can be an effective means of coach education. These views have been supported by other research which recognises that working with athletes who have disabilities can be a positive learning experience (e.g. Cronin et al. 2018). Accordingly, coach educators and those that design coach education may wish to consider how coaching athletes with disabilities can be represented in coach education.

Theme 4: Advocacy by Policy Makers

Across several case studies, policy makers highlighted the importance of advocating for disability sport provision. Traditionally, disability sport has been underfunded and marginalised. Accordingly, in order to develop disability coaching, policy makers may need to advocate for disability sport. In the two scenarios that follow, policy makers describe how and why they have furthered disability sport by engaging allies across organisations. In the first scenario, a development officer at a large disability sports club explains how the club has advocated for more sports events to be held in the City. In time, this has enabled them to advocate for their disabled members. In the second scenario, a policy maker describes how an emphasis on disability sport coaching has been embedded throughout sport policy in a large European country.

Scenario 1: Lobbying for disability sport events

> 2008/2009 was a turning point and a highlight for me because we held some international disability sport events including basketball and table tennis. The highlight is seeing the impact of organizing those major events has had on disabled sport now. More high-profile disability sports events are now being attracted to the city, which in turn helps promote the whole pathway for disability sport, whether it's coaching, participating, playing. It also helps to have more facilities and we've got the Special Olympics coming up soon. There's key funding that supports all these events, and the more we can target and attract them into the city region, the better it is in terms of the economy, but also for the visibility of disabled people. Since those 2009 events, the city is not scared to bid for disability events.
>
> A big part of that 2008/2009 success was lobbying the City, lobbying key influence-makers to recognize that disability sport, really is sport. Back then, disability sport was not always recognised as a sport. Now, disability sport has become part of the agenda and people are actually saying, “Let's take you and take it seriously. Let's work with the national governing bodies of disability sport.” Look at something like Boccia that maybe isn't as high profile as some of the other mainstream sports but plays a key role in terms of the equality and diversity agenda. This legacy for the city is to take Boccia and say, “Okay, that’s just a major event, but what can we do at a grassroots level to influence this from schools to communities, to cities, to clubs, to activities and make a real difference?”
>
> Moving forward, if we want to remove some of the barriers that disabled people face, we have to put funding into those areas. For that to happen, key influence-makers have

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to be on board and drive the agenda from a political government perspective right the way down to the local aspect. Our chairman, has done that work. He has sat on government committees. He would push himself out there and kept saying that disability sport was part of the city, and it had this much role to play as any other sport. He would come back and tell us what was happening. If we wanted to be involved in an initiative, we could invest the time where we want it. It allowed us to actually look at issues collaboratively together and starting to look at each individual area that influences the lives of disabled people; whether that's transport, whether that's facilities, we're starting to talk about those issues. He has worked with the council, and now the universities. He has taken the time to build some of those relationships up and having someone who actually sees the benefit of disability sport on committees is one of the key things because that allows us to drive our own strategic agenda. The only way to achieve our plan is to try and work in collaboration with different partners. The idea of working with partners on their agendas. The idea of showing then benefits of disabled sport to people in powerful positions. Then, of course, the idea of people with disability being embedded right throughout this process.

Scenario 2: Lobbying for disability sport in national policy

At the top, we do not have enough people with a disability. At national meetings there is often not any disabled people. So, we need to have more disabled athletes, disabled coaches, disabled leaders, disabled policy makers. Without this, you cannot just assume that disabled sport will be provided for. You have to spell it out all the time. All the time! You have to repeatedly ask where the money is for disabled people. You also need leaders to do that for you. But some of them, even from a minister down, could be scared of using the wrong words. We need to make sure that people understand acronyms and terminology, because they can be so scared of not being politically correct. They don't want to talk about the disability because they are scared of saying something wrong. So, I can't expect everyone to understand the terminology. We need to elaborate and help people with the terminology, so they can advocate for disability sport. So first, we need to work with the communications department to elaborate the terms for everyone, then we invite the federations and the key administrators in the federations. Then you have to listen and allow people to talk and see what they agenda is.

After that, you need to come up with a key simple message. Keep it simple. For us, it is don't be scared of disabled people, just talk to people. Speak to the individual first, and you can find out about the diagnosis later. That is our ground level message. Then, we also need to work with materials and designer to make sure disability sport is presented to coaches in that way and to make sure that we work online to make sure the simple message is presented.

We also work with universities and meet with them several times a year to be critical and share with us their findings. And we have a separate collaboration with a university who follow our strategy and we always invite them to our AGM, our conferences and we are always involving them. It is good to have that collaboration and a good academic foundation for your messages.

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Across both case studies, partnerships appear to be very important. In developing partnerships, clear communication appears essential. In the first scenario, the chairman repeatedly advocated for disability sport, and similarly in the second scenario, the policy maker was keen to repeat clear messages. In doing so, the case studies provide a pathway for those seeking to develop disability sport coaching. Specifically, in order to further disability sport provision, policy makers may need to:

1) Identify key partners;
2) Listen to and support partner's agendas;
3) Have a simple and clear message outlining the aims and objectives regarding what they are aiming to achieve;
4) Help people to communicate and advocate for inclusion, recognising the importance of terminology and educational resources;
5) Relentlessly advocate for disabled people, not just in sport but in wider everyday life.

Theme 5: Wider Benefits for Participants

The final theme recognises that across the case studies interviewees reported a range of wider benefits that athletes with impairments were perceived to experience through coaching. The benefit of participating in Parasport included accessing physiological training but also a wider range of psychological support and social learning through sport experiences. The key benefits and support are outlined in the scenarios below.

Scenario 1: Improving Athlete's Functional Movement

> The athletes I currently work with are older. They're at a stage in their life where their impairments are really negatively impacting on them. Although I'm working with them to try and get them to Paralympic Games and potential medallists, I can't stop myself having a more holistic approach. It's about their long term health and wellbeing first, and their sporting prowess second because sport is going to be a relatively short part of their life. They've got to be able to invest in their life.
>
> I'll just give you one example. I had a lecture at a university and a student wheeled in one day to the class and I thought, "She looks quite fit and athletic. I think I could do something with her." I said, "Would you like to come along and try some throwing. This is who I am." Then I got that weird look, first of all, like, "Okay. Somebody's spoken to me."
>
> She came along to a throwing session and she became involved. The more I got to know her, and the more I got to know her impairment, I was unsure why she used her wheelchair so much. Her background was as a professional football player in the US and she was experiencing some knee pain and back pain which got worse at the time. Then eventually, through investigation, it was found that she was born with a form of spina bifida. She got to 19-20 years of age without even realizing it. At the same time, it was also discovered that she had other problems with her spine and that's what was causing her the pain and discomfort. Then, she became an occasional wheelchair user.

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Then, just over time, the easiest thing for her to do was to start mobilizing in a wheelchair, and she did that most of the time. But I thought “Your impairment suggests to me that you shouldn't really be in a wheelchair that much."

Now, seven years after meeting her at the University, she's now walking much more. It probably took a year to really get to know her and to know what I thought was possible for her, and then it was just a case of giving her confidence. Not saying, "oh you can't do this, or you can't do that," but actually encouraging her to try little things and showing her what she can do it. I eventually said, "I don't think that you need to be in a wheelchair that much. I think it's partly situational. If you'd had the right support around you at the time that this was happening, you probably wouldn't have needed to start using a wheelchair." We worked with the strength and conditioning coach and the massage guy to say, "This is what I think is capable of her. Anatomically and physiologically your impairment suggests that this is possible, do you want to work towards it”. And we just did it in stages like that. Providing safe environments for her but challenging her as well. More often than not, she's walking into the centre rather than pushing into the centre. So, with a lot of physical training, she is now walking about much more often. That kind of story, to me, is what Parasport is all about. It is helping her as an athlete but also as an individual to have more daily function. If I hadn't been involved in sport, then I probably would never have met her.

Scenario 2: Accessing Psychological Support through Interdisciplinary Parasport Teams

There are a lot of people that have taken up Parasport because they have acquired impairments. There tends to be a lot of paralyses, for example in one of the legs. There's a high preponderance particularly, in sitting volleyball, with trauma athletes. We could name teams where a lot of people have lost limbs because they've been in wars, bombings or trauma. One girl on our team lost her foot through a very bad accident. One girl caught a bug. She was a very active physical education teacher but lost her lower limb function through a simple bug that she caught out in Australia.

I think that this brings about mental challenges as well as physical. An emotional challenge in as much as they're battling with themselves, a new identity and also battling with a new sport. This is because invariably they picked up sports late in their career, or late in their life. It's not like we've gone through a long-term athlete development pathway. More a case of all of a sudden, they've said, "Well, I have had an accident and I used to play badminton when I used to walk, maybe I can pick up volleyball since it's a similar sport." That brings about lots of challenges. It brings about this thing of trying to coach the person, rather than coaching the sport.

Choosing the right people around the squad is very important to help. We have two psychologists that are very tuned into disability. Also, a strength and conditioning coach that worked with the athlete rather than saying, "I know how the body works, so I should be able to help you," but trying to work with the athlete or work with the sport to find the best way to do things”. Sport helps to connect athletes with these people.

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Scenario 3: Learning through Social Interaction with Others

> At one competition we met a competitor who had a double arm amputation, which is the same as one of my athletes. They started talking about their disability and how they functioned. This guy, told my athlete that he was fully functioning, and nobody was helping with everyday tasks. As a double amputee, my athlete struggled with tasks such as getting dressed and in particular, 'pulling his pants up'. Because he could not do this, it was difficult for him emotionally and socially. He had to have help throughout the day such as when going to the toilet.
>
> As a coach and therapist, I did not know how to help him because I have little experience of amputee disabilities. So, I didn't know how he could pull his pants up, and even the athlete did not know himself. But the other athlete could do it. He had a stick with a hook at the end. You can collapse the stick into a smaller stick and keep it in your pocket. It is kind of a self-made device that he pulls out and opens it up. He places it by his shoulder and uses the hook to pull his pants up. It takes him a long time, but he is doing it by himself.
>
> So, we saw this device and got one constructed for my guy too. Now he is pulling his pants up himself for the past year and a half. He is so proud, and it is really important, because he can go to the toilet by himself and that is really important psychologically and socially. It was awesome to learn how we could help him in his life, and we only learned about it by going to Parasport competitions.

Across the scenarios, athletes with impairments can access physiological, psychological and social support and benefits through participating in Parasport. Such benefits not only have an influence on their ability to train and perform but may also influence their wider personal and social lives outside of sport. Indeed, the case study coaches, often cited coaching individuals through Parasport as their raison d'etre for their practice. The coaches described an emphasis on people, relationships and a holistic approach to coaching. Such philosophies are widely accepted as good practice in coaching and although the Parasport scenarios presented here may be specific to athletes with impairments, the principle of knowing the athletes, considering their multidisciplinary needs and working with athletes to develop, are relevant to coaching in all contexts (Cronin & Armour, 2018).

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7.0 Discussion of key findings

Through a two-phase research design encompassing both quantitative and qualitative data generation, this report has explored the demographics of the Para coach workforce, their learning, educational and developmental characteristics, gaps in knowledge as well has presenting initial insights into best practices. Specifically, the workforce audit and follow up interviews sought to provide a broad picture of the coaching context in order to identify gaps in knowledge and education provision. The best practice case studies provided a contextual account of pockets of good practice that move towards developing solutions to the gaps identified through the work force audit. Together these findings will inform the development of the Para Coach Framework and Online Course.

Para coaching as blended profession

Analysis of the survey data and follow up interviews revealed a workforce consisting of full (N=79), part-time (N=53), sessional (N=65) and volunteer (N=112) coaches working across participation, talent development and elite sport contexts. This is consistent with previous workforce audits within the UK context (e.g., North, 2009). Furthermore, the workforce is reflective of a highly educated population with 114 participants holding undergraduate and postgraduate qualifications. Two assumptions may explain the need to demonstrate higher levels of education. Firstly, a greater number of the coaching sample were positioned within the elite Para sport context whereby knowledge relating to disciplines - i.e. sport sciences - is valued (Schempp & McCullick, 2010; Lyle & Cushion, 2017). Secondly, there may be a need for coaches to have a minimal level of education in order to understand how best to work with athletes whose impairment requires specialist attention. In keeping with research, there was a gender imbalance within this sample of coaches (male v female) and the cohort were mainly white and were in mid to higher socio-economic groupings. Surprisingly, there was a dearth of disabled coaches and this may indicate the dominance of non-disabled people influencing this specific context. While there is evidence to suggest that contextual structures (e.g. Sport Governing Bodies) have complied with social model requirements to provide access for disabled performers in sport (Townsend et al, 2015), this is yet to translate to disabled coaches. As such, the Para coach context may be missing out on valuable Para athlete experiences and knowledge as athletes do not seem to be transitioning into coaching (Douglas et al., 2018) Finally, coaches' responses to the survey showed that they were evenly spread across coaching roles, master coach (N=107); head coach (N=72); coach (N=77); and assistant coach (N=19). However, given the various contexts coaches operate within, these values are to be taken with some caution. Nevertheless, the diverse coaching population operating across the athlete pathway could be considered a 'blended profession' (Duffy et al., (2011). In conceptualising Para coaching as a 'blended profession', the report seeks to provide some clarity - moving towards increased professionalism - against a highly diverse contextual field (Taylor & Garrett, 2010). This blended profession may not fit with fixed traditional models of professional identity (e.g. teaching or medicine) but still requires recognition and investment at all levels (Duffy et al., 2011; North et al., 2019).

Key results

Serendipitous encounters with disability

Commonly reported across the coaching workforce was previous experience as performers and possibly unique to this study, the greatest percentage (41%) attaining international status as athletes. Whereas only 14% competed at regional and 17% at participation. Thus, the coaching workforce reflected a group that were socialised through sport and in so doing were in position to take a step into coaching. However, despite their previous experiences in sport, coaches' entry into Para coaching happened serendipitously in line with other sport coaching research (e.g. Cregan et al, 2007; McMaster et al, 2012). Meaning that for the majority of coaches, entry into a coaching role was not a planned process but resulted through 'chance' being immersed within the context and in response to an opportunity provided by their own coach or a need within the local sports club (Douglas et al, 2018). In addition, entry into coaching went beyond the participation route and included those who started coaching because of experience as a parent or carer of a disabled athlete. Once coaches have stepped into the Para coach context, the results suggested they commit years of experience to coaching and this might explain the cluster of coaches within the following ages ranges: 25-34; 35-44; 45-54; 55-64. The serendipitous entry into coaching identifies the lack of a coherent pathway into Para coaching as a direct career choice. Indeed, full time paid coaches seemed to be clustered towards the elite – talent development end of the Para sport pathway and focused on one sport. As such, the Para sport context maybe undervalued by coaches, sporting agencies and sport funding bodies. However, coaches committed to coaching within the participation domain volunteered their time across several sports, ages and impairment groups. Hence, validating the need to understand the workforce further and to continually promote Para coaching as a blended profession with learning support (e.g. coach education, mentors, and CPD) being made available and aligned accordingly along the coach development pathway.

Coach education, learning and knowledge acquisition

Nelson, Cushion and Potrac (2006) suggested that coaches learn through three difference sites, considered as formal, nonformal and informal. Each of these sites serving a function which researchers suggest both facilitate and to a certain extent constrain knowledge acquisition and its application in practice. Within this study some coaches held a number of formal coach education qualifications at various levels (e.g., level 1 (N=10), level 2 (N=21), level 3 (N=28) and level 4 (N=13). However, given the various national coach education frameworks and the lack of fit with the European Qualification Framework (EQF), these results may not be a true reflection of a standardisation of coaches' knowledge (Mallett, Trudel & Rynne, 2009). Furthermore, analyses also suggested a number of coaches (N=98) within the sample held no recognised formal coach education, however, the majority of these coaches (73%) reported having previous international athlete experiences in non-disabled sport. Leading to the assumption that previous international athletic experience maybe highly valued and for some provided a means to access coaching positions (McMaster et al., 2012; Douglas et al., 2018). Indeed, as commonly reported within the coaching literature formal coach education is often viewed as individually, contextually and practically irrelevant (McMaster, et al., 2012; Tawse et al., 2012; Douglas et al., 2018) for coaches in disability sport. However, the number of non-certified coaches operating across para sport and the lack of a regulatory body across the EU ensuring minimal guidelines are followed is a concern.

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Whilst, there was some evidence to suggest some coaches within this current study saw value in their formal coach education, one of the significant findings of this analysis - and consistent with Para sport research - was the lack of formal coach education reflecting the uniqueness of working within the Para sport context (McMaster, et al., 2012; Tawse et al., 2012; Douglas et al., 2018). Hence, it was not surprising that coaches (27%) ranked formal learning as having the least value when compared to non-formal and informal situations (Douglas et al, 2018). However, when exploring the best practice case study vignettes, coaches who had experienced integrated formal coach education reported positive experiences and perceptions. Indeed, the findings revealed that integrated coach education could dispel both fear and the stigma associated with coaching in the disability sport context. Furthermore, some coaches went further by suggesting that exposure to disabled performers during coach education would improve the learning experience. Arguably, both the lack and potential of integrated coach education curriculums continues to evidence the need for addressing the specific needs of coaching with Para sport. Furthermore, these findings are in keeping with the fragmented nature of coach education provision across the EU in which different social structures (sporting agencies) enable or disabled the production of coaches knowledge (Thomas, 1999).

The dearth of disability-specific formal learning opportunities meant coaches reported valuing and relying on informal and non-formal sites of learning. With respect to non-formal opportunities, (31%) of coaches reported and valued attendance at CPD events, workshops and conferences that are often considered to be contextually authentic. However, the number of coached attending non-formal learning opportunities in the last twelve months was only (56%), of which only 32% of participants perceived the content to be relevant to para sport. This continues to reflect an under resourced coach educational landscape (Cregan et al., 2007; McMaster, et al., 2012; Duarte & Culver, 2014). It is important to note at this juncture that whilst non-formal learning sites were valued it does not provide evidence that such opportunities were impactful on coach learning. Therefore, understanding the needs of the coaching population is of vital importance when designing specific learning events.

Within this sample of coaches - and in line with wider sport coaching literature - informal learning was reported as having the highest influence on their learning (e.g. McMaster et al, 2012; Fairhurst, et al, 2017) Here informal learning refers to knowledge gained through experience and social interaction with others that often goes unrecognised (Cushion et al, 2010). As such, several researchers acknowledge that learning to coach started through experiences as athletes (Lyle & Cushion, 2017). However, given that the majority of this sample of coaches were non-disabled, much of the reported learning centred on experimentation, innovation and adaptation of normative approaches (Taylor et al's., 2014; Douglas et al., 2018). Consequently, learning with the athlete (Carter & Bloom, 2009) was reported as being an important source of knowledge, especially with reference to the nature of impairment effects on practice (Cregan et al., 2007; McMaster, et al., 2012; Tawse et al., 2012; Wareham, et al., 2017). However, some coaches found it difficult to articulate how adaptations were made whilst others suggested there was no difference between coaching disabled and non-disabled performers. Here the move to normalise coaching across the disability and non-disabled sporting contexts was reflective of what Gavron and Depauw (2005) called the 'invisibility of disability' in which the application of 'able-bodied and mainstream coaching principles' is simply transferable into a context considered to have additional 'constraints' (Townsend et al, 2017, p. 2). These views reflective of the taken-for-granted nature of tacit knowledge, if left unchecked can reproduced 'disablism' (Thomas, 2007) within para sport. In

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reality, similar to Wareham et al. (2017), athletes' impairment shaped coaches knowledge in this current study through which adaptations were made to: accessible structures and transportation, ways of communicating, organising the practice space, modifying training loads, developing equipment, ensuring athletes received autonomy and creating independent learners. Additionally, two of the best practice vignettes demonstrated how some coaches went further to designing new sports to facilitate participation for their athletes. Arguably, this required coaches to learn about the athlete's specific needs through collaborative action. Similarly, although not explicitly reported, some coaches also highlighted how their athletes relied on assisted technology - such as wheelchairs, prosthetic limbs, sport-specific throwing implements and frames – to perform and so arguably coaches learning would include gaining knowledge about the nature of technology from their performers.

As well learning from or with their athletes, coaches also placed value in learning from their peers or expert coaches. The assumption being that more experienced coaches are able to offer knowledge on 'what works', providing a crucial learning opportunity in the absence of formal education. In addition, in contrast to the findings of Fairhurst, et al's., (2017) study in which Paralympic coaches were able to access mentoring opportunities, very few coaches within the current study reported having access to formal and informal mentoring even though it is considered to positively impact coaches' practice (McMaster et al., 2012; Duarte & Culver, 2014; Fairhurst et al., 2017). Consequently, the lack of formalised mentoring support to promote the learning of Para coaches add further cause for concern and continues to reflect a sporting context that 'disables' the generation of knowledge required effectively support disabled performers (Thomas, 2004).

According to Cote and Gilbert (2009), the integration and application of professional, interpersonal and intrapersonal knowledge is consistent with developing effective coaching. However, in this research, analysis of the data suggested that whilst coaches desired to pursue knowledge and, in doing so, demonstrated elements of intrapersonal knowledge – a desire to learn - some coaches were very clear about the limitations of their professional knowledge in relation to coaching disabled athletes. These limitations mainly centred on disability specific knowledge (Fairhurst et al.,2017) resulting from the disruptive nature of 'impairment' (Townsend et al., 2016). and the various effects it had on performance. Consequently, coaches had were seeking learning opportunities to improve their understanding of impairment, sport science, classification, sport psychology, practice design, and associated skills such as planning and monitoring progress. Additionally, for some coaches the impairment effect also impacted coaches' ability to communicate effectively with their athletes and hence highlighted the need for interpersonal knowledge. Whilst respecting the disruptive nature of impairment to coaches' knowledge, it is important to mention that if left unchecked, coaches and agencies desire for knowledge can implicitly align with medical model understandings of disability which may problematize the impairment along with the person

Cote and Gilbert (2009) acknowledged the application of knowledge needs to be context and athlete specific, however, Cushion and Lyle's (2017) framework goes further by suggesting that performance outcomes – a measure of coaching effectiveness – may be impacted by the availability of 'resources' or lack thereof, which in this case is clearly the lack of coach education. What is clear therefore, that a key barrier to developing effective coaching is the lack of a coherent educational pathway for coaches to engage with. Thus, to progress towards the professionalization of disability sport coaching, coaches must be supported by 'the state' as a 'central driver of coaching change' (North, 2019, p. 14). Indeed, several participants within this sample made reference to the lack of financial support framing their coaching

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context. Consequently, coaches may know what knowledge they need to be effective but are constrained by the context in which they operate. As such making educational resources freely available could provide more coaches with access to key knowledge thereby improving practice for disabled performers.

Coach philosophy and disability

Sport coaching is largely recognised as social practice undertaken within cultural contexts such as Para sport (Cushion & Jones, 2014). Hence, coaching within Paralympic and disability sport will have been shaped by social norms and values that are inherent within coaches' tacit knowledge. Here tacit knowledge referring to the often unnoticed, unexplained and unexplainable nature of coaches intuitive responses that are influenced through experiences in differing contexts (Cushion & Partington, 2014). Therefore, exploring coaches' tacit knowledge can provide explanations as to why coaches have particular values, views, behaviours and approaches. Given that disabled people have been historically marginalised from society and sporting opportunities and breaking down these social barriers continues to be the aim of the Paralympic movement (IPC, 2019), how coaches - as gatekeepers to coaching opportunities in this context - understand disability is of importance (Townsend et al., 2018). Consequently, understanding coach philosophy as a collective of "values, beliefs, assumptions, attitudes, principles and priorities" may illuminate coaches' practice ideals (Lyle & Cushion, p. 235; Cushion & Partington, 2014).

Whilst exploring coaches' understanding of 'coaching philosophy' was not an explicit focus of this research, as expected some coaches were able to describe philosophical beliefs perceived to shape their practice experiences. Hence, the analysis suggested some coaches expressed the need to adopt a 'person' or 'athlete' centred approach as a part of their coaching role. Importantly, this view was closely linked to the level of functionality associated with the athlete's impairment. Whilst at face value 'person centred' coaching seems positive, a focus on overcoming disability aligns with a medical model view which problematizes the individual. In contrast, others were seemingly aware of the social barriers reflective of both social (Barns & Mercer, 2013) and socio relational models (Thomas, 1999) that excluded disabled people from sport and so developing independence, connection and integration were expressed ideals. Yet, others seemed to attempt to normalise 'disability' by suggesting that Para sport is no different or the same as mainstream, able-bodied sport (see section on coach education). Thus, this report suggests that philosophically beliefs and understandings of disability are at the core of the Para coaching context and require further illumination.

Within the resourced starved Para coach context, it was not surprising to see some coaches and coach educators align with activist tendencies. Indeed, a number of authors have reported that para athletes often share a common desire to create a move inclusive sporting environment (e.g. Bundon & Clarke, 2015; Bundon & Best, 2016). Similarly, analysis of best practice case studies highlighted a desire by some participants to develop key partnerships to firstly advocated for an increase in disability sport provision and in the other context ensure that disability was on the agenda items of government offices and policy makers. Furthermore, one interviewee highlighted the need "to have more disabled athletes, disabled coaches, disabled leaders, disabled policy makers" which further demonstrates that Para sport and Para coaching is yet to be considered an inclusive environment for disabled people to involved at all levels of sport. Hence more work is needed at a management and policy level to ensure the

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central aspects of the social model and human rights models of disability are actualised in the removal of all physical and social barriers.

In an attempt to expand our knowledge of quality sporting provision for disabled performers, Evan's et al., (2018) extensive study identified that perceptions of quality were associated with one or more of the following constructs: belongingness, autonomy, challenge, mastery, engagement and meaning. Similarly, in the current study some coaching provision seemed to align with most of the criterion exemplified by Evan et al., (2018). For example, within the case study (see section 6.3) gaining more function through specific training could have provided the athlete a sense of mastery and challenge. Whilst social interaction with other disabled athletes made possible during training and competition allow athletes sharing the same levels of functionality to exchange ways to gain more independence and hence provide a sense of belongingness and meaning. Finally, coaches who shared their value for athlete centred coaching provide athletes with a sense of autonomy which also leads to engagement with the coaching process (Banack et al, 2011).

This discussion has attempted to provide an overview of the key findings of this research in which the coach, athlete and context are relationally bound. As such, the nature of learning, development and education of Para coaches can be viewed as fragmented and lacking. Meaning that for the majority of coaches learning to become effective is undertaken through practice and hence vital knowledge is not widely available to all. Despite, this lack there exists pockets of 'best practice' in the, coaching of athletes which considers individual needs and the level of impairment and the provision of integrated coach education. Hence the findings of this report can provide applied recommendations in the next section.

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8.0 Recommendations

This research attempted to provide an overview of the EU Para coaching workforce and to identify examples coaches and coach educators' perceptions of best practice. Based on the analysis of participants' data the following recommendations were identified for practical application to support the development, education and mobility of Para coaches. However, given the contextual variations with regards to support for Para coaches, coaches knowledge, perceptions of disability, practice aims and financial support, these findings are to be considered as guidelines for change where required.

- Para coaching as a blended profession requires further support from government, sport governing bodies and agencies in charge of coach education to align education and learning according to coaches who are: in full time, part time and voluntary positions; holding differing levels of responsibility (e.g. head coach – assistant coach); and coach in and across the different domains of sport (e.g. participation to elite performance).
- The dearth of disabled coaches must be addressed and agencies responsible for the identification and development of coaches must develop specific strategies aimed at ensuring more athletes transition into coaching.
- Lack of fit between national coaching qualifications and the EQF requires addressing and the development of a Para Coach Framework could prove vital in ensuring consistency and regulation across the EU. Consequently, the mobility of coaches could be enhanced.
- Ensuing the current mainstream coach education provision integrates knowledge and practice about coaching disabled participants should promote coaching in this context as a viable career. Additionally, disability sports should be supported financially in developing sports specific qualification mapped to the EQF. This will ensure a clear coach education and career pathway for Para Coaches.
- Creating and disseminating knowledge about delivering high quality coaching in this unique context is of vital importance in moving the field forward, therefore creating communities and networks of shared practices, developing para coach mentors and making resources feely available to all coaches along the sport pathway requires consideration.
- Greater communication between and within international and national agencies is required to unify the para context. As such, Para sport specific workshops and conferences should be created and made available for all coaches. Additionally, given that coaches require knowledge about classification, impairment and sport science, these conferences should integrate all aspects of the coaching process.
- Coaches need to be made aware of the historical, cultural and social perceptions of disability that have led to their marginalisation from sport. This requires more than simply planning adaptions to sporting provision but requiring coaches to check attitudinal barriers that inhibit their effectives.
- Finally, the provision of sporting opportunities for disabled people must be available in integrated and separated settings, thereby giving this population the choice to participate according to their motivations and goals. Therefore, sporting structures must address the limited availability of quality provision at the grass roots level of sport.

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