Safeguarding Education in Athletics:

A comparative evaluation of training effect in three modes of entry-level safeguarding training delivered by UK Athletics

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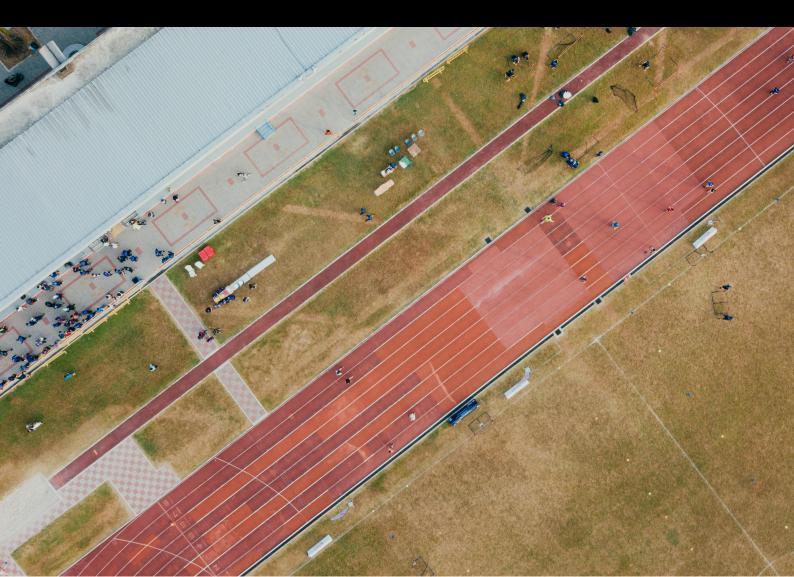
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Safeguarding Education in Athletics: A comparative evaluation of training effect in three modes of entry-level safeguarding training delivered by UK Athletics

A report for UK Athletics Edge Hill University

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The Evaluation Team

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Jane Fylan – UKA Project Director; Georgina Williams – UKA Coach Education & Qualifications Lead; Paul Moseley – Course Content Manager (secondment); Lee Dakin – Head of IT; Caroline Small – Executive Assistant; Kylie Ferguson/Ellen Butcher – Education Administration; Lynette Smith – England Athletics; Hayley Cooper – England Athletics.

UK Athletics

Executive summary

Following appointment in January 2020, the evaluation team and the project steering group agreed an evaluation based on a two-way comparison between 'Blended' and 'Online' delivery to investigate efficacy of UKA's safeguarding training. The COVID pandemic occurred shortly after the project commenced, therefore, all UKA's 'face-to-face' events, including training, were cancelled or postponed.

Similar to other fields, the sport sector moved swiftly to online means of working and communicating in response to COVID restrictions. It quickly became clear that the project would need to adapt if it was to maintain relevance as online communication rapidly became the norm and expectations for online learning increased significantly.

UKA evolved their 'face-to-face' training module into a *virtual* offering, via their online platform. Following these changes, the evaluation adapted to compare *three* modes of delivery of entry-level safeguarding training for the sport of athletics. We describe these as follows:

- 1. Virtual: a tutor-led online, real-time, interactive classroom with multiple learners
- 2. Face-to-Face: a tutor-led, physical (or actual) classroom with multiple learners
- 3. Online: a pre-configured online training module navigated independently by learner

Following a synthesis of evidence, including two extensive literature reviews, an evaluation framework and relevant instruments were developed. The evaluation focused on *learning* but also explored participant satisfaction and knowledge retention. Learning was measured via participant perceptions of their confidence relating to safeguarding issues across three dimensions: understanding, recognising, and responding.

Therefore, the central evaluation question was: which mode of delivery has the largest impact on the confidence of training participants in terms of understanding, recognising, and responding to, safeguarding concerns?

To answer this question, we employed quantitative and qualitative methods of data collection. In order to capture the effect of training, a bespoke online questionnaire was designed and implemented with training participants at two points, shortly before and shortly after training, across all three modes. In addition, semi-structured interviews were designed and conducted with a sample of trainees, shortly after either Virtual or Face-to-Face training, to explore their views in greater depth.

Our evaluation clearly shows that participants on the UKA safeguarding training, regardless of delivery mode, experience increases in confidence in safeguarding-specific knowledge, whilst levels of course satisfaction and achievement of learning outcomes are also high across all modes.

In all training modes, there were statistically significant increases in confidence across the three dimensions of *understanding*, *recognising*, and *responding*. On these measures, then, we do not recommend one form of training over another. However, increases in self-perceived confidence were higher among the tutor-led cohorts compared to the Online cohort, particularly in *understanding* safeguarding. The impact of training on learner

confidence was also stronger within the tutor-led cohorts for those with no prior training or experience.

Key Finding 1:

Post-training increases in self-perceived confidence were significant in all three training modes, with a less pronounced effect for the Online cohort.

Key Finding 2:

Increases in confidence were particularly strong in tutor-led training for learners with little or no prior training.

Interview data with a sample of Virtual and Face-to-Face learners supported survey findings and added further insights. Participants were, in general, very positive about the content, coverage and delivery of the training they received. Many appreciated the convenience of the online module, and the benefits of learners being able to choose the time, place and pace of their learning.

Key Finding 3:

Learners valued the convenience and flexibility of online safeguarding training resources.

The benefits of peer engagement and collaboration provided by the tutor-led (Face-to-Face and Virtual) approaches were highly valued by trainees as was the guidance and leadership of tutors. The opportunity to engage and reflect by discussing, questioning and sharing experiences was perceived to create a meaningful learning opportunity, through the exchange of ideas and the co-creation of knowledge. This is also supported by our review of literature. However, it should be noted that the Online cohort did not participate in interviews.

Key Finding 4:

Learners who experienced tutor-led safeguarding training valued opportunities for contextualized discussion and peer-collaboration.

In addition to the above, we also make some further observations. First, the scheduling of safeguarding as the final element of the day (within Face-to-Face training) was unavoidable due to COVID restrictions, however, learners indicated that this timing may be problematic in

terms of learner fatigue and the importance it may appear to assign to safeguarding. We suggest this is something that training providers should consider in planning their safeguarding training, especially where it sits within a broader programme of training/coach education. Second, quality assurance essential processes are education/training, compliance, and maintenance of standards. This is particularly important where training is delivered by staff who are not safeguarding professionals. Where such processes do not already exist, we recommend that training providers within sport introduce appropriate quality assurance measures. Third, this evaluation did not extend to the translation of knowledge into practice and safeguarding outcomes. The extent to which the, largely volunteer, workforce within sport is able to put safeguarding knowledge into practice is clearly crucial and would provide important strategic information for the sector. Future evaluation and/or research studies might include this aspect in relation to training efficacy. Finally, in the evaluation of safeguarding training in sport and its contribution to the sector, we suggest that the sport sector should consider measuring the return on investment provided by safeguarding training and assessing its long-term impact on children/vulnerable adults/athlete welfare and the wider sports community.

Conclusion

In this comparison of introductory safeguarding training for athletics, a significant learning effect was found in all three cohorts or modes of training (Online, Virtual, Face-to-Face). This effect was weakest in the Online cohort. In addition to the stronger learning effect found within the two tutor-led cohorts, tutor-led training was particularly effective where understanding of safeguarding was low or weak.

We found that self-directed (online) training is effective, but that tutor-led training ('virtual' or 'face-to-face') provides a dynamic, contextualised learning environment where the opportunity to discuss anxieties or ask questions is of importance to, and valued by, learners.

We conclude that a programme of safeguarding training that provides multiple learning pathways offers the most appropriate and effective approach and that tutor-led safeguarding training is a necessary and important feature of a robust safeguarding programme for the sport sector. We also suggest that tutor-led training is important for the embedding of safeguarding within 'normal' coaching practice and wider sports culture.

Recommendations

Following analysis of all data, we make the following recommendations.

Recommendation 1: Training providers should establish multiple training/learning pathways that provide both tutor-led training and self-guided online training.

Recommendation 2: Training for learners with little or no prior knowledge or experience of safeguarding in sport should include tutor-led training.

Recommendation 3: Training providers should ensure regular assessments of established training programmes to monitor fidelity of programme delivery and compliance with standards of delivery.

Recommendation 4: Future evaluations should explore application of learning to practice and the extent to which self-efficacy translates into improvements in safeguarding behaviour and performance.

Recommendation 5: Training providers should consider measuring the return on investment from safeguarding training and assessing its long-term impact on children/vulnerable adults/athlete welfare.

1. Introduction

Measures to prevent abuse and poor practice are an area of priority for NGBs and the sport sector more broadly. Sport England recently identified 'positive experiences for all children and young people' as one of its 'five big issues' within the *Uniting the Movement* strategy (Sport England, 2021).

1.1 Safeguarding Training in Sport

Safeguarding was formally introduced within the British sport sector in 2001 with the establishment of the *Child Protection in Sport Unit* (CPSU) and the publication of national *Standards for Safeguarding Children in Sport* (CPSU, 2003). 'Education and Training' (Standard 7) was explicitly recognised. The current version of the national standards states:

Everyone in contact with children has a role to play in their protection. They can only do so confidently and effectively if they are aware and have the necessary understanding and skills. Organisations providing sporting activities for children have a responsibility to provide learning, training and development opportunities for staff and volunteers.

(CPSU, 2018, p.12)

The first two criteria of this standard are:

- There is an induction process for all staff and volunteers who have significant contact with children and young people. This includes familiarisation with the child protection/safeguarding policy and procedures and the relevant code of conduct/ethics.
- All staff and volunteers are provided with opportunities to learn about how to recognise and respond to concerns about child abuse.

(CPSU, 2018, p.12)

Therefore, safeguarding training has been part of the sporting landscape in the UK and a central element in the UK's strategy for safeguarding in sport for nearly 20 years.

The national standards do not stipulate that safeguarding training should be provided in a specific form or mode of delivery. For any organization seeking to provide training and education, a range of factors arise in relation to how such training can and should be delivered. The particular challenges that NGBs confront in discharging its obligations to the welfare of its athletes and coaches requires careful calibration of resources and long-term commitment to workforce development.

Given the voluntary nature of its staff and the significant geographical footprint of NGBs in England, the sport sector has particular challenges to address when deciding the best way to train its volunteering base on safeguarding issues. The emergence of different training modes, such as online modules and Virtual Learning Environments (VLE) which offer flexible and cost-effective ways to deliver safeguarding training means that NGBs are faced with difficult choices about how best to deliver safeguarding training. There is a clear need for robust evidence on what constitutes best practice in the field. This difficulty was at the heart of the impetus to assess efficacy of training modes within UK Athletics.

1.2 The evaluation

In October 2019 Edge Hill University (EHU) were invited to submit an evaluation proposal based on the following brief:

UK Athletics wish to identify the most effective delivery method for Safeguarding training for our UKA Licensed Coaches. UKA presently deliver Safeguarding training via a digital online platform, however the sport sector is coming under increasing pressure to deliver Face-to-face Safeguarding Training. The sector presently lacks robust research evidence to support the most effective delivery method and UKA welcomes the input from research specialists within this area who will work with UKA to scope, deliver and assess the effectiveness of the following two delivery methods:

- Face-to-face (Safeguarding Training will be incorporated into existing Coach Education course delivery on entry level courses).
- Online Safeguarding Course (present status quo).

Following appointment in January 2020, the evaluation team and UKA steering group subsequently agreed a project inception document in March 2020 stating the key project objectives and activities. This described an evaluation on a two-way comparison between 'Blended' and 'Online' delivery to investigate efficacy across various domains. A project end date of 15th January 2021 was agreed.

The *online* course (designed by *EduCare®*) represented the status quo in UKA (and its constituent national bodies); a *blended* course, incorporating both face-to-face and online elements, would be designed and implemented specifically for the evaluation and within the early stages of the project timetable.

EHU subsequently developed a comparative evaluative study design to assess UKA's delivery of safeguarding training to its members during 2020. Using a pre- and post-observational design, the principal data collection instrument was an online questionnaire. This design aimed to capture change – or training effect – *within* each cohort and *between* each cohort or training mode.

However, the COVID pandemic occurred shortly after the project commenced and the first national 'lockdown' restricted travel to essential purposes only from late March to June 2020. Therefore, all UKA's in-person events, including training, were cancelled or postponed. Thus, eight training events scheduled for inclusion in the evaluation, across May and June 2020, were cancelled.

Every effort was made by UKA to reschedule this training. However, the uncertainty around COVID restrictions made planning very difficult. In the end, one training session was delivered and observed in September 2020. However, IT issues prevented full implementation of the survey instrument and regrettably data collection opportunities could not be exploited. It was not until mid-April 2021 that face-to-face training resumed, with social distancing and face-covering measures in place.

Similar to other fields, the sport sector moved swiftly to online means of working and communicating in response to COVID restrictions. It soon became clear to the Steering Group that the project would need to adapt if it was to maintain relevancy in a rapidly developing environment where online communication and training was becoming the norm.

Therefore, UKA and EHU agreed that the evaluation would be adapted to include a third stream of training that would reflect current developments. UKA introduced a new *virtual learning environment* (VLE) for their safeguarding training combining 'live' tutor delivery with self-directed learning within a *virtual* online space. This virtual space was created within the UKA online platform.

Thus, in essence two types of blended learning were developed - *virtual* and *physical* or *'face-to-face'* - which would be evaluated alongside the non-blended, self-directed *online* training.

The project was subsequently adjusted to evaluate and compare *three* modes of delivery of safeguarding training. We describe these as follows:

Virtual: a tutor-led online, real-time, interactive classroom with multiple learners

Face-to-Face: a tutor-led, physical (or actual) classroom with multiple learners

Online: a pre-configured online training module navigated independently by learner

In both the Virtual and Face-to-Face courses, participants were also required to complete supplementary online material independently to complete their coaching qualification.

To provide parity, the UKA training coordinator used the content of the original training package by *EduCare®* as a template for the additional training pathways. All cohorts received a Multiple-Choice Question (MCQ) test within the training to assess achievement of learning outcomes.

It is also important to note that safeguarding training for cohorts 1 and 2 occurred within a broader programme of training for coaching and leadership in athletics – either *Coaching Assistant* or *Leader in Running and Fitness* - delivered over 1 day. Therefore, to facilitate the physical or in-person element of the evaluation, safeguarding training for cohort 2 occurred within a full day of face-to-face training in other areas of athletics coaching. In all instances the safeguarding training for cohorts 1 and 2 was the final hour of the day, approximately between 4pm and 5pm.

2. Methodology

2.1 Context

Any evaluation using an observational real-time methodology poses significant challenges as 'variables' influencing outcomes cannot be controlled in a similar way as is the case in a laboratory experiment. In our case, the participants were subject to a wide range of personal and social influences as well as extraneous factors that often resist categorisation and quantification. The COVID pandemic exacerbated the uncertainty and variability of study environment. Restrictions on movement and social distancing requirements necessitated an unprecedented societal shift to online communication platforms and brought into play factors such as familiarity with, and acceptance of, online technology.

2.2 Evaluation

Evaluations are studies that assess the impact of a particular existing standard of service. They may utilise comparative study designs that allow evaluators to examine the strengths and weaknesses of two or more different services or service delivery methods.

The training evaluation framework below (Buckley & Caple, 2009, p.231) identifies five domains relevant for any training:

- i. **Reaction:** for example, programme satisfaction, learning conditions, methods and tactics used in the training
- ii. **Learning**: the principles, facts and techniques learned by the students
- iii. **Job Behaviour & Performance**: the changes in job performance resulting from the training or how learning at the previous level has been applied by students
- iv. *Organisation:* the tangible results of training in terms of organizational improvements and change.
- v. **Return on Training Investment**: the costs of designing and implementing training programmes compared to the financial outcomes resulting from such programmes.

During early discussion with UKA it was agreed that the second domain, *Learning*, would be the focus in this evaluation and this would be operationalised in a specific way. However, we also provide some data on the first domain, *Reaction*.

A comparative *pre-post* evaluation design was deemed appropriate. Two data points were proposed, at *baseline* (shortly prior to training) and at *post-training* (within a 1-week window following the delivery of the training). Post-training interviews were also conducted with a purposive sample of volunteers who had undertaken the training.

Whilst the ultimate test of safeguarding training is *behaviour change* and the benefits this brings to the welfare of children, there was a consensus that the most appropriate approach for this evaluation would be to measure the self-perceptions of learners as key indicators of *training efficacy*.

2.2.1 Evaluation questions

The primary evaluation questions were:

Which mode of training delivery has the largest impact on the confidence of participants in relation to *understanding* safeguarding, *identifying* or *recognising* safeguarding concerns, and *responding* to safeguarding concerns?

Following completion of UKA safeguarding training, how do participants reflect on their experience of the training and the efficacy of the different modes?

Secondary evaluation questions were:

Does the training delivery method affect the *acquisition* and *retention* of content provided within UKA safeguarding training?

Does the training delivery method affect course satisfaction levels of trainees and if so to what extent?

2.2.3 Methods

To answer the study questions, the evaluation employed a mixed-methods design with multiple methods of data collection.

The evaluation was conducted in two broad phases.

2.2.3.1 Phase 1

The first phase comprised an evidence synthesis, through a scoping review of existing published evidence, including grey literature. Two literature reviews were provided to UKA and its partners, presented here in Appendix A. This phase also included a set of semi-structured interviews with coach education tutors and key stakeholders engaged in the design, development and delivery of safeguarding training.

2.2.3.2 Phase 2

In the second phase, instruments were developed and utilised to enable the team to gather relevant information from participants of coaching modules delivered by the three modes: Online, Virtual (or VLE), and 'Face-to-Face' training.

2.2.4 Data collection methods

The evaluation required the design, development, and piloting of two instruments, a semistructured interview schedule, and an online questionnaire.

The semi-structured interview schedule was developed by the evaluation team following the scoping review and the documentary analysis. Semi-structured interviews were conducted and recorded once participant consent had been obtained. Interviews were carried out either by phone, by video-call, or (in one instance, prior to COVID restrictions) in-person, and were arranged at a time and place/mode of convenience for interviewees. All interviews were audio recorded, transcribed, and anonymised at the point of transcription. Transcriptions were available only to the evaluation team.

The principal evaluation instrument was an online questionnaire administered both prior to and following training. The questionnaire was developed in close consultation with UKA to reflect the primary focus of the evaluation. Both instruments were tested before use with

members of the athletics community (i.e., coaches, athletes and officials). The questionnaire contained generic items and some items specific for each training mode of delivery to adequately capture aspects that deviated in each training mode.

The questionnaire was developed and disseminated through the online platform at OnlineSurveys.ac.uk following piloting. Data obtained through the survey was kept and secured on Edge Hill University servers and was analysed using IBM SPSS Statistics for Windows, Version 26.0.

The interviews with key stakeholders in the field of delivering safeguarding courses informed and further refined our understanding of the outcome measures as did observations of training delivery facilitated by eight recordings of VLE training sessions and five in-person observations of face-to-face training sessions during one weekend in April 2021.

2.2.5 Ethical Approval and Governance

As a service evaluation the study did not require University ethical approval in line with current ethical review and approval guidelines. The evaluation team obtained written confirmation to this effect from the Chair of the Research Ethics Committee.

2.2.6 Sampling of participants

Key stakeholders for semi-structured interviews were selected purposively from cohorts 1 and 2. Sampling for questionnaire participants is described in Chapter 4.

2.3 Development of Questionnaire

The evidence synthesis identified a range of factors or elements that were identified as significant to explore in order to establish efficacy of safeguarding training. These guided the process of developing each questionnaire.

In the questionnaire these factors were operationalised through exploring self-reported *confidence* in relation to safeguarding. Questions explored participants confidence in relation to three dimensions: their *understanding* of key areas and concepts (e.g. child protection), their confidence in *recognising* specific forms of abuse and poor practice (e.g. physical abuse), and their confidence in *responding* appropriately (i.e. recording, reporting) to specific safeguarding concerns (e.g. bullying). Respondents were asked to assess their confidence on an 11-point scale from 0 (not at all confident) to 10 (completely confident).

3. Context: Stakeholder Perspectives

Training activities occur within a specific social, cultural and organizational context. Therefore, this evaluation undertook a preliminary scoping of this context through qualitative (semi-structured) interviews with key stakeholders.

The following section 'sets the scene' regarding safeguarding and related training in British athletics, based on interviews with eight UKA tutors (volunteers) and five key stakeholders who were representatives from organisations within the sport sector, including UK Athletics. A thematic analysis of interview transcripts generated two broad themes:

- the development of approaches to safeguarding in sport
- co-creation of context-specific training

The first theme relates to the development of approaches to safeguarding in sport. This is comprised of the sub-themes of 'changes in society and organisational culture' and 'cocreation of context-specific training'.

3.1 Development of approaches to safeguarding training in sport

3.1.1 Changes in society and in organisational culture

The inception of the CPSU in 2001 formalised nationwide child protection standards for sports organisations. Research identified challenges in the introduction and early implementation of child protection within sport (Brackenridge et al., 2007; Hartill & Prescott, 2007). Two decades later, related policies and procedures have become more embedded in the sport sector (Lang & Hartill, 2015), with some sport organisations developing bespoke safeguarding policies and procedures to reflect the demands of their particular sports (Lang, 2021), noted by one of the interviewees:

I think the embedding has got better and there [are] pockets of brilliant practice.

This was echoed by another interviewee who stated:

... safeguarding has "moved on from those sort of standards or requirements of policies, procedures... Now we are recognizing that certain sports need to have a better understanding about certain things... We started and it was great, but people want more, people recognize their responsibility and their position and they want to make sure they are equipped to deal with it.

Equipping the sporting workforce for their role in safeguarding requires that policies, procedures and training provision are relevant and reflect contemporary and changing concerns in society, such as increasing concerns about unsafe online behaviours. At present, the aim of the UKA safeguarding training is to "make people aware of the topics around safeguarding [and] to put that into an athletics context". The interviewees highlighted that the training was necessary to increase awareness of safeguarding in the sport sector. The significance of this training was emphasised by the interviewees. For example:

I just want to be really sure that these people with positions of responsibility are properly equipped to deal with, identify, recognise concerns.

3.1.2 Coaches' acceptance of safeguarding

The sport of athletics in the UK largely depends on volunteers (e.g. coaches, officials). In 2003, when mandatory safeguarding training for coaches was introduced, there were concerns that compulsory training in the area would 'put people off' or encourage staff and volunteers to leave sport (Lang, 2010). However, interviewees reflected that:

if [they didn't] make it mandatory then the numbers of people that [did] it will be those that ... feel they have an interest or a responsibility within their club to do it.

Whilst the training was aimed at ensuring all involved in athletics were aware of safeguarding in sport and understood how to promote safe sport, the interviewees also acknowledged that quality safeguarding provision required the introduction of additional roles and responsibilities:

It's one of those things that... you've got to do... it's seen almost as a, a negative thing in a way in terms of having to, to achieve it.... It's a positive, you know, it has to be done and it's important, but in order to achieve it actually it takes a lot of extra organisation and effort...even down to finding somebody who's willing to be a welfare officer because if the shit hits the fan, then the welfare officer, [is] the one who's going to take that on and they're probably in a voluntary...position? And so why should they take that extra... responsibility on?...I think safeguarding is a difficult topic to actually achieve.

In spite of challenges, interviewees noted, "there has been "massive growth and a change in attitude and culture" as "people [have started] to recognize their role [in] safeguarding at all different levels." Furthermore, interviewees highlighted that completing safeguarding training was now more accepted and often viewed by coaches as a necessary step of NGB registration schemes, i.e. "part of my licensing."

Whilst interviewees noted that there have been improvements in accepting safeguarding training as a requirement to achieve a coaching qualification, the value participants placed on this training was questioned:

There are people that will do courses and think 'this is really important, I need to take this forward.' There are other people who think 'okay, so for this qualification, what tick boxes do I need?'

As such, for interviewees it was a continuous challenge to present safeguarding content:

...in an appropriate way... coaches will see [it] as just as crucial to them as let's say, the core content of a sport.

While the value the participants placed on the topic and how they approached the training varied, interviewees believed that the courses were achieving what was intended:

And people, I've spoken to a number of them who have done it who say that they are now quite comfortable with the knowledge that they've been given. They're not frightened by it, which was a concern at the outset, that we would frighten people with safeguarding. They're coming away saying 'if I get an

issue now, I know where to go. I know I don't do it myself, I know I'm going to go there or I'm going to do that'. So that's a plus for me.

However, one interviewee stated that there was still much work to be done:

...I still think there's quite a long way to go in, in a lot of clubs for, for inappropriate behaviour to be challenged....

3.1.3 Acknowledging the 'tech-savvy' learner

Since the introduction of mandatory safeguarding training in 2003, there have been numerous developments in its delivery and content. In particular, a 'tech-savvy' population was recognised by interviewees as having a large impact on how training could and should be delivered. As one interviewee noted:

... the amount of people that have computers in their home or a tablet is massive...essentially people can access [training] from anywhere.

While previously access to devices and internet might have had an impact upon the number of people who could undertake training courses online, this now appears to apply to a minority of people.

Furthermore, as a consequence of easy access to the internet, using it to search for information is normalised. These changes have had an impact on learners' expectations. One interviewee explained:

There is a real desire from people though, to get what they can digitally.... Children and young people coming through, they have very different perspectives and sport needs to be fast to adapt to new coaches coming through.

While there had been changes in society that have influenced how people use technology, the COVID pandemic was acknowledged as contributing towards an even greater tech-savvy population and introduced new possibilities and acceptance for online provision:

I would have probably said before lockdown, a lot of people probably do prefer the face-to-face... In the past month I seem to have been online more than ever and I have completely taken a different sort of perspective in it.

3.2 Co-creation of context-specific training

In designing and developing relevant and meaningful training courses and resources for learners, interviewees drew attention to the positive working relationship between UKA and the CPSU:

... it's good 'cause' we've been in there and helped shape it, you know, which has been quite key and therefore the Child Protection Support Unit have been very open to listening to us and have done a good job at responding to our needs, basically, they haven't just come to us and... given us an 'off the shelf' package, they've been open to developing bespoke training and that's been absolutely crucial for us.

Ensuring that the content was appropriate to the audience was identified as important by an interviewee who provided the following example:

... they developed one of the existing courses that we currently offer across athletics [and it] is now more bespoke to the communities, athletics, and the environment, with some examples around athletics clubs, athletics examples.

In addition to working with the CPSU, interviewees highlighted that the content was also shaped in light of discussions with tutors and by feedback from participants:

One of the things that's done really well is the feedback from the people who have been on the course but also listening to the people that are teaching it.

Such a democratic approach was viewed positively by tutors who were regularly engaging with the content and with learners:

We came up with another few scenarios that would work really well because we're within obviously the course environment on a day-to-day basis and we knew what would work well....

3.3 Summary

Over the past two decades, there has been rapid expansion of access to and engagement with the internet and digital technologies. The immediacy, portability and reach achieved through digital devices has transformed how people engage socially and their expectations towards learning environments. In addition to keeping pace with technological changes in society, it is important to acknowledge that the athletics workforce is largely comprised of volunteers. Therefore, the design of high quality, meaningful, relevant and affordable training courses that will engage learners is of importance.

Three contextual factors emerged over the last decade to define the field of safeguarding in sport. First, safeguarding has come to be viewed as an important part of sports training and coaching, even though the value learners place on this content and subsequently how they approach the training, still varies across the volunteer workforce. Equipping the workforce to deliver safeguarding effectively has become of critical importance. Second, the learning process has undergone a significant transformation through the onset of online learning which again, has been accelerated by the COVID pandemic. Third, effective safeguarding education remains critically dependent on expertise developed by the CPSU whilst specific content continues to develop.

4. Evaluation of training effect

4.1 Summary of method and analysis

The questionnaires were implemented using the *Online Surveys* platform and produced mainly quantitative data that were subjected to descriptive and inferential analyses. To do this, we constructed three cohorts of participants, each corresponding to one mode of delivery. Responses from participants who failed to complete either the pre- or post-training survey were excluded. Pre- and post-training survey responses were matched and paired to allow analyses demonstrating the change of attributes, perceptions, or skills over time through a 'within subject design' approach. This approach is appropriate where the focus of investigation is on a change of one or several measures following an intervention or training programme. The total number of matched pairs for each cohort were as follows:

Table 4.1. Breakdown of matched responses by training cohort

Cohort	Training mode	Matched pair responses
Cohort 1	Virtual (VLE)	40
Cohort 2	Face-to-Face	40
Cohort 3	Online	43

Data were 'cleaned' and missing values were treated in line with requirements set out by the various statistical analyses employed. Descriptive analysis of relevant demographic, learning and outcomes variables was conducted using frequencies and percentages. We report percentages only (in charts and tables) as numbers in some variables are below 5, which increases the identifiability of participants.

The key question of the survey was: which mode of delivery has the largest impact on the confidence of training participants in terms of understanding, identifying or recognising, and responding to, safeguarding concerns?

To answer this question, we employed a two-pronged approach utilising two different test strategies to capture any potential change from pre- to post-training measures. Within the survey, there were 17 questions on safeguarding-specific self-efficacy/confidence, measured on an 11-point Likert scale. These question items were answered in the pre-training survey to provide a baseline figure and in the post-training survey to identify whether the training had increased the participant's level of confidence in different elements of safeguarding.

First, we ran a Wilcoxon Signed Rank test for all the questions on matched pairs for each cohort. The Wilcoxon Signed Rank test is commonly used in educational research to detect whether a group of students or trainees experiences an increase in performance following an educational or training intervention. The advantage of this test is that it is robust for any group of students or trainees where the performance measure is taken before and after the intervention. The disadvantage of the test is that, as a 'within subjects' test, it cannot be conducted across different groups.

The second approach we utilised was to undertake a range of statistical tests to compare the differences in training across the cohorts of the three different modes of delivery (Virtual, Face-to-Face, and Online). First, an exploratory Principal Component Analysis (PCA) was

undertaken on the safeguarding-specific self-efficacy items to identify if the 17 questions are part of specific components of safeguarding-specific self-efficacy. This analysis identified three components of safeguarding-specific self-efficacy: responding to safeguarding concerns (9 items), understanding of safeguarding issues (4 items) and recognising safeguarding issues (4 items). Following reliability analysis, a composite score was created for each safeguarding-specific confidence component at both the pre- and post-training levels through adding question scores together.

Creating a composite score allowed us to calculate a maximum score for every participant relating to each aspect of confidence. Paired Sample t-tests were used to compare the differences between pre- and post-training scores, Independent Samples t-tests were used to compare prior safeguarding training experience and confidence levels, and one-way ANOVAs were used to compare the differences between the cohorts at both the pre- and post-training levels. To gain a comprehensive picture of the effect of training type on safeguarding-specific self-efficacy/confidence in our study, both the Wilcoxon Signed Rank Test, the Paired Samples t-tests, and one-way ANOVAs should thus be considered. We further undertook one-Way ANOVAs to compare differences in training satisfaction, knowledge retention and learning responses across the cohorts.

4.2 Results

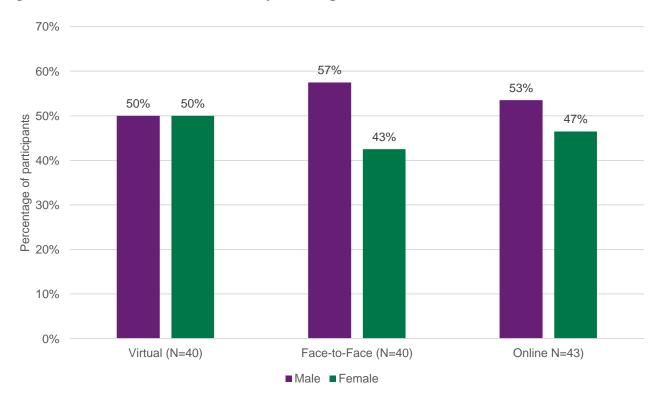
We report the results of descriptive analyses containing information about the demographic characteristics of participants first. The results of the statistical analyses are reported narratively and through tables and figures. All information, tables and charts are based on data from matched pairs *only*. Tables and Figures display percentages to minimise the risk of identifying participants where there are a small number of responses. Rounding of percentages has been undertaken throughout this report for ease of reporting and understanding. It is important to keep in mind that the following demographic data relates to participants in the survey rather than the actual training cohorts.

4.2.1 Demographic Characteristics of Survey Participants

4.2.1.1 Gender

There was an even split between male and female participants for the Virtual version of the training. Males slightly outnumbered females in the Face-to-Face and Online version of the training.

Figure 4.1. Breakdown of Gender by training cohort



4.2.1.2 Age

There was a relatively normal distribution of participants of all ages in all versions of the training, although a few participants in the Face-to-Face cohort preferred not to divulge their age.

Table 4.2. Breakdown of age ranges across the three cohorts

Cohort	18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65+	PNTS*
Virtual (n=40)	0%	12%	30%	40%	15%	3%	0%
Face-to-Face (n=39)	3%	18%	24%	33%	7%	5%	10%
Online (n=43)	2%	7%	28%	49%	12%	2%	0%

^{*}Prefer Not to Say

4.2.1.3 Ethnicity

Ethnic composition of participant groups differed between the different versions of training. Virtual training respondents were all of white ethnicity, whilst Face-to-Face were a more ethnically mixed participant base.

Table 4.3. Ethnicity of participants by training cohort

Cohort	White	Asian or Asian British	Mixed	Black or Black British	Arab	Other	PNTS
Virtual (n=40)	100%	0%	0%	0%	0%	0%	0%
Face-to-Face (n=40)	83%	3%	4%	5%	0%	0%	5%
Online (n=43)	98%	2%	0%	0%	0%	0%	0%

4.2.1.4 Employment within Sport

Only a small minority of participants in Face-to-Face training sessions were employed within sport.

Table 4.4. Employment within sport by cohort

Cohort	Yes	No
Virtual (n=40)	0%	100%
Face-to-Face (n=40)	8%	92%
Online (n=42)	0%	100%

4.2.1.5 Role in Athletics

Participants occupied a whole range of different roles in their club or organisation. *Athletes* and *volunteers* constituted the largest groups of participants in each training cohort. Administrators, board members and licensed officials were entirely absent in our sample of survey participants.

Table 4.5. Current role in athletics by training cohort

Cohort	Coach	Assistant Coach	Club Official	Physio	Athlete	Administrator	Parent-helper	Volunteer	Board member	Licenced Official	Other
Virtual (N=39)	5%	0%	8%	0%	41%	0%	0%	43%	0%	0%	3%
Face-to-Face (N=39)	5%	18%	3%	0%	43%	0%	8%	15%	0%	0%	8%
Online (N=43)	2%	0%	12%	0%	35%	0%	0%	49%	0%	0%	2%

4.2.2 Previous safeguarding experience

4.2.2.1 Safeguarding role

Whilst safeguarding is 'everyone's responsibility', some individuals occupy roles with a specific safeguarding responsibility, such as *Club Welfare Officer* or *Designated Safeguarding Officer*. The overwhelming majority of participants in all three training cohorts were currently *not* in a specific or designated safeguarding role, with the highest number in the Online cohort (7%). Three per cent of the Virtual cohort had previously been in a safeguarding role.

Table 4.6. Previous safeguarding experience by cohort

Cohort	Yes	No	No, but previously	Don't know
Virtual (N=40)	5%	87%	3%	5%
Face-to-Face (N=40)	3%	97%	0%	0%
Online (N=42)	7%	91%	0%	2%

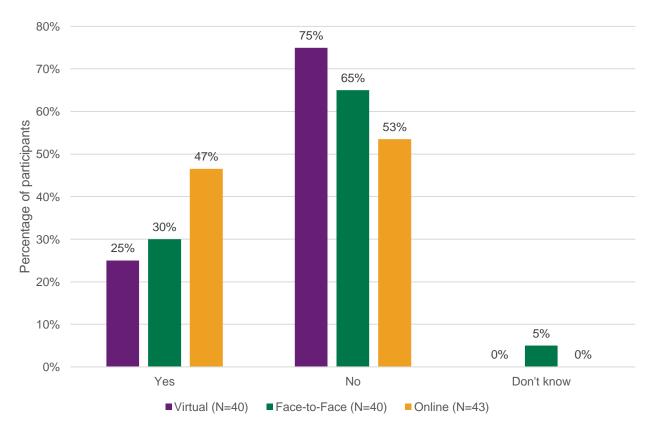
4.2.2.2 Safeguarding training

The following data merges responses to two questions about previous safeguarding training, either by UKA or by other organisations. The number of participants who had previously completed safeguarding training differed between the groups. Three-quarters of the Virtual cohort had no previous safeguarding training, whilst nearly 50 per cent of the Online cohort had previously undertaken safeguarding training.

Table 4.7. Previous safeguarding training by cohort

Cohort	Yes	No	Don't know
Virtual (N=40)	25%	75%	0%
Face-to-Face (N=40)	30%	65%	5%
Online (N=43)	47%	53%	0%

Figure 4.2. Proportion of participants who had previously completed safeguarding training by cohort



4.2.3 Training Outcomes

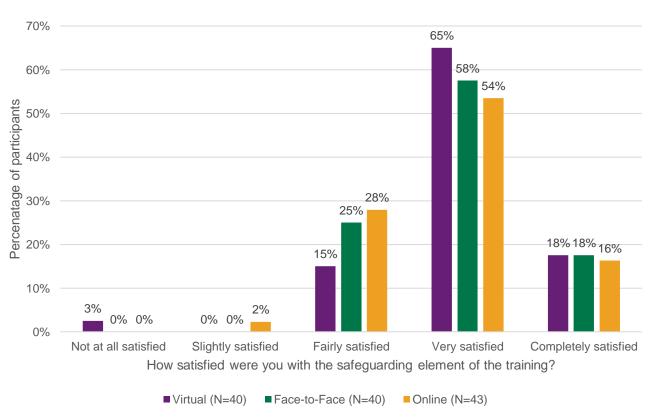
4.2.3.1 Satisfaction with training

Satisfaction with the training was generally high across all three cohorts. 83 per cent of the Virtual cohort were either *very* or *completely* satisfied, compared to 76 per cent of the Faceto-Face cohort, and 70 per cent of the Online cohort. Further analysis identified no significant difference in satisfaction levels between the training cohorts.

Table 4.8. Satisfaction with the training by cohort

Cohort	Not at all satisfied	Slightly satisfied	Fairly satisfied	Very satisfied	Completely satisfied
Virtual (N=40)	3%	0%	15%	64%	18%
Face-to-Face (N=40)	0%	0%	25%	57%	18%
Online (N=43)	0%	2%	28%	54%	16%

Figure 4.3. Satisfaction with the training by cohort



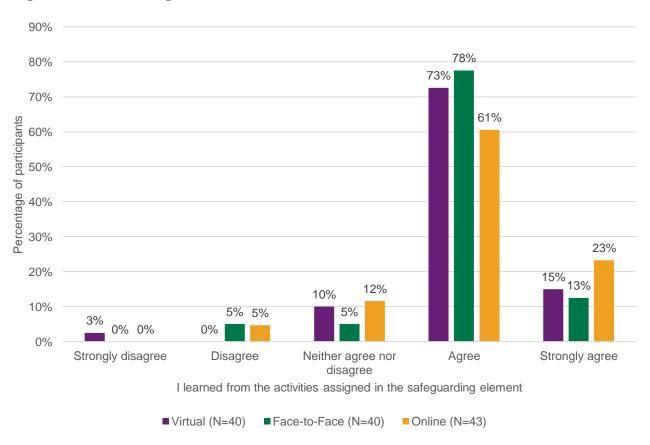
4.2.3.2 Learning

There were some minor differences in participants' perceptions as to whether they had learnt something from the training's activities. 91 per cent of the Face-to-Face cohort either *agreed* or *strongly agreed* they had learned something from the course, compared to 88 per cent of the Virtual cohort, and 84 per cent of the Online cohort (although a larger proportion of the Online cohort *strongly agreed* that they had learnt something from the course). Thus, differences between the cohorts, in the proportion of participants *agreeing* or *strongly agreeing* that they had learned something from the training activities, were minimal.

Table 4.9. Proportion of participants who felt they had learnt from the activities assigned in the training

Cohort	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Virtual (N=40)	3%	0%	10%	72%	15%
Face-to-Face (N=40)	0%	5%	5%	77%	13%
Online (N=43)	0%	5%	12%	60%	23%

Figure 4.4. Proportion of participants who felt they had learnt from the activities assigned in the training



We also conducted a test to assess the differential impact of training modes on learning. We identified a significant difference relating to participants' perception of learning. A larger

number of participants on the Face-to-Face training courses thought that the course had increased their knowledge of safeguarding in comparison to the Online course.

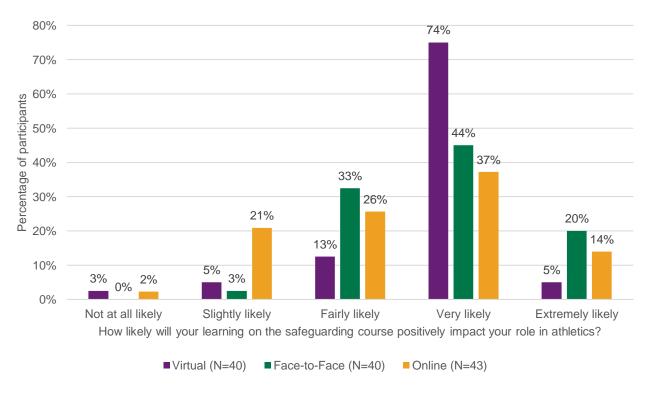
4.2.3.3 Impact on role

We also asked whether participants thought the training would have an impact on their role in athletics. 80 per cent of the Virtual cohort stated it was *very likely* or *extremely likely*, compared to 65 per cent of the Face-to-Face cohort, and 51 per cent of the Online cohort. Therefore, the survey data revealed that the Virtual cohort perceived it substantively more likely that the training would have an impact on their role compared to the other two groups, especially the Online cohort.

Table 4.10. The likely extent of the positive impact of the training on participants' role in athletics by cohort

Cohort	Not at all likely	Slightly likely	Fairly likely	Very likely	Extremely likely
Virtual (N=40)	3%	5%	13%	74%	5%
Face-to-Face (N=40)	0%	3%	33%	44%	20%
Online (N=43)	2%	21%	26%	37%	14%

Figure 4.5. The likely extent of the positive impact of the training on participants' role in athletics by cohort



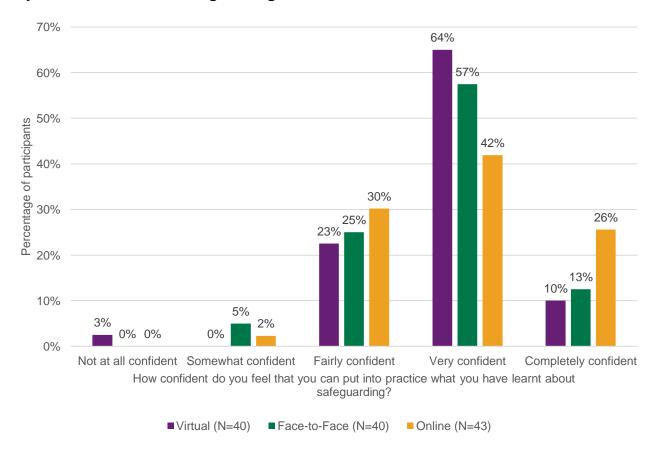
4.2.3.4 Translation into Safeguarding Practice

Trainees were also asked how confident they were that they would be able to translate their learning into practice. Most respondents in all groups said that they were either *very* or *completely* confident. 75 per cent of the Virtual cohort stated they were either *very* or *completely confident*, compared to 70 per cent of the Face-to-Face cohort, and 68 per cent of the Online cohort.

Table 4.11. Participants' levels of confidence that they could put into practice what they have learnt about safeguarding

Cohort	Not at all confident	Somewhat confident	Fairly confident	Very confident	Completely confident
Virtual (N=40)	3%	0%	23%	64%	10%
Face-to-Face (N=40)	0%	5%	25%	57%	13%
Online (N=43)	0%	2%	30%	42%	26%

Figure 4.6. Participants' levels of confidence that they could put into practice what they have learnt about safeguarding



4.2.3.5 Knowledge

In all three cohorts, a large majority of respondents agreed or strongly agreed that they had increased their knowledge by completing the course. However, Face-to-Face trainees were

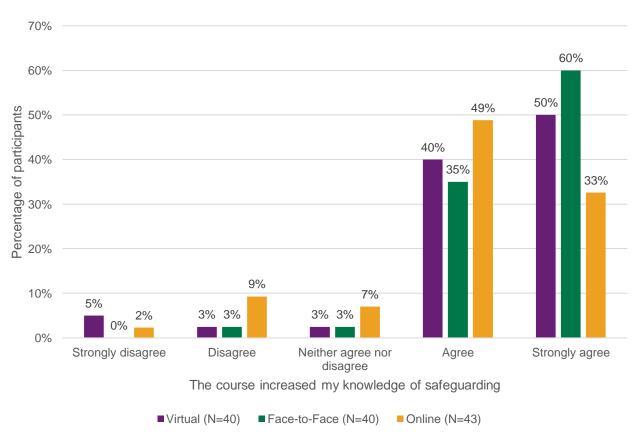
strongest in their opinion that they had learned something from the training (95%) followed by Virtual trainees (90%) and Online trainees (82%). At the other end of the scale, 11 per cent of Online trainees stated they *disagreed* or *strongly disagreed* that they had increased their safeguarding knowledge against 8 per cent of VLE trainees and 3 per cent of Face-to-Face trainees. A one-way ANOVA identified a significant difference in the responses, with participants in the Face-to-Face cohort reporting higher scores than the Online cohort, there was no significant differences between the other cohorts.

Table 4.12. Proportion of participants who thought the course had increased their

knowledge of safeguarding

Cohort	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Virtual (N=40)	5%	3%	3%	40%	49%
Face-to-Face (N=40)	0%	3%	3%	35%	59%
Online (N=43)	2%	9%	7%	49%	33%

Figure 4.7. Proportion of participants who thought the course had increased their knowledge of safeguarding



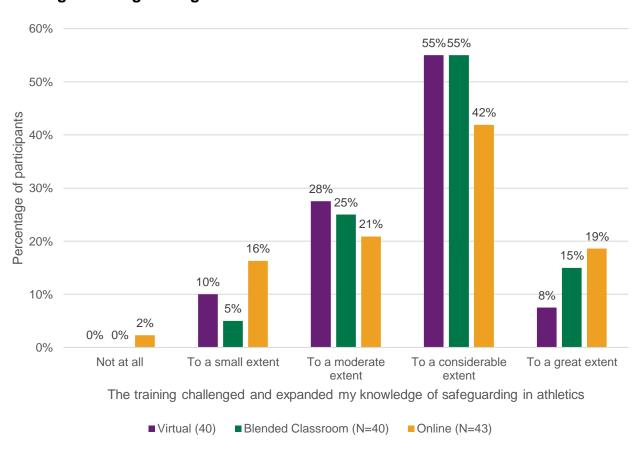
A follow-up question explored the extent to which participants felt the training had challenged and expanded their knowledge of safeguarding in athletics. Again, the Virtual and Online modes appeared to have this effect to a lesser extent than the Face-to-Face version of the

training: 16 per cent of the Online cohort felt that the training had only increased their knowledge to a 'small extent' compared to 10 per cent of the Virtual cohort and 5 per cent of the Face-to-Face cohort, yet at the other end of the scale, more of the Online cohort (19%) felt the training had increased their knowledge to a 'great extent', compared to 8 per cent of the Virtual cohort and 15 per cent of the Face-to-Face cohort. However, a one-way ANOVA found there was no significant differences across the cohorts.

Table 4.13. The extent to which the training challenged and expanded the participants' knowledge of safeguarding in athletics

Cohort	Not at all	Small extent	Moderate extent	Considera ble extent	Great extent
Virtual (N=40)	0%	10%	28%	54%	8%
Face-to-Face (N=40)	0%	5%	25%	55%	15%
Online (N=43)	2%	16%	21%	42%	19%

Figure 4.8. The extent to which the training challenged and expanded the participants' knowledge of safeguarding



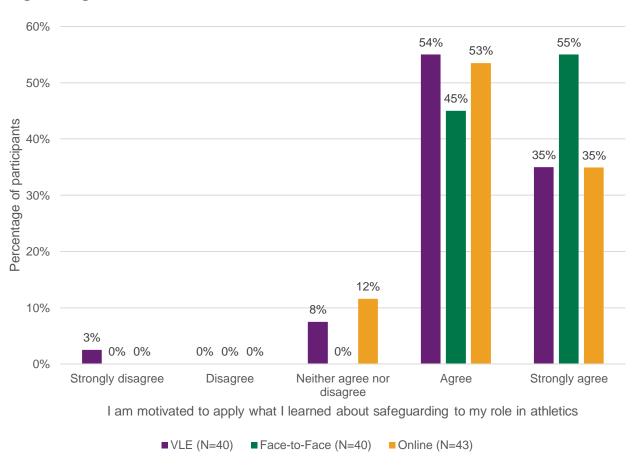
4.2.3.6 Motivation to Apply their Learning

The vast majority of participants across all three cohorts were motivated to apply what they had learned about safeguarding to their role in athletics. 55 per cent of participants in the Face-to-Face cohort strongly agreed, in comparison to 35 per cent in the Virtual and Online cohorts.

Table 4.14. Proportion of participants motivated to apply their learning about safeguarding in their role by cohort

Cohort	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Virtual (N=40)	3%	0%	8%	54%	35%
Face-to-Face (N=40)	0%	0%	0%	45%	55%
Online (N=43)	0%	0%	12%	53%	35%

Figure 4.9. The proportion of participants motivated to apply their learning about safeguarding in their role



4.2.4 Analysis of Safeguarding-specific confidence across the training cohorts

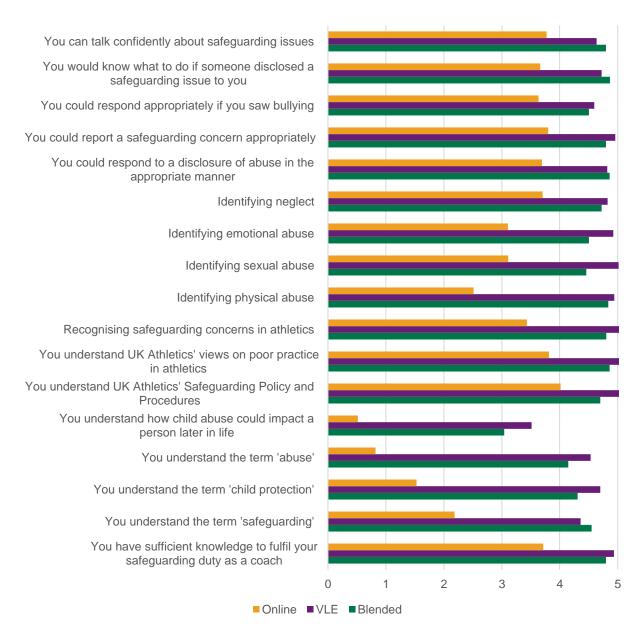
In the section below, we report the results of the Wilcoxon Signed Rank test first, and then the results of the Paired Samples t-Tests, Independent Samples t-Tests, and One-way ANOVAs.

4.2.4.1 Change in Confidence Items between Pre- and Post-Training Responses

The Signed Rank test clearly showed that the effect of the Online training was different for most of the items we explored compared to the other two types of training. The change between pre- and post-test result for each item are shown in the diagram below. Numeric

steps represent the change in each item between pre- and post-training as measured against the mean for each cohort. The test clearly shows greater changes in confidence for the Virtual and Face-to-Face cohorts.

Figure 4.10. Change in Z score between pre- and post-training for each training cohort by question



4.2.4.2 Change in Safeguarding-specific Self-Efficacy between Pre- and Post-Training Responses

We report below the results of the paired samples t-tests, independent samples t-tests, and One-Way ANOVAs for the three components of safeguarding-specific self-efficacy (responding, understanding, recognising) for each group of trainees. In all three domains, the Online cohort exhibited a higher level of confidence at the baseline level of pre-training, however, this was only significantly different for the *Understanding of safeguarding issues* component.

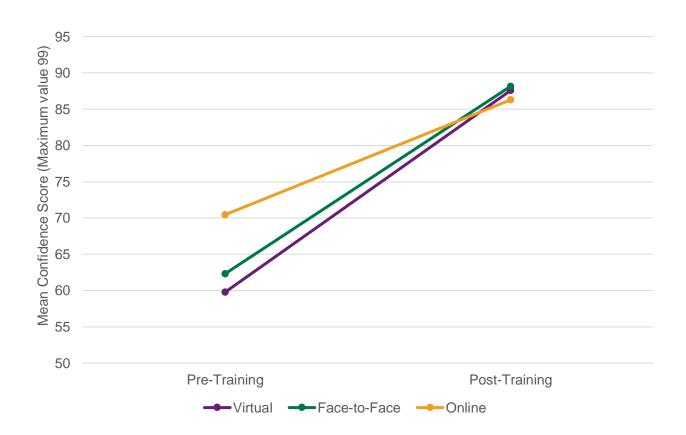
4.2.4.2.1 Responding to Safeguarding Concerns

The analysis shows that there was a marked increase in the confidence in *responding to safeguarding concerns* amongst participants in all three types of training. There was no significant difference between the cohorts at the pre-training level, and no significant difference in mean confidence level between the cohorts at the post-training level. All training cohorts experienced a significant increase between the baseline pre-training score and the post-training score.

Table 4.15. Mean confidence in responding to safeguarding concerns (pre- and post-training) by cohort

Cohort	Pre-Training Mean	Post-Training Mean	Change
Virtual (VLE)	59.8	87.6	+27.8
Face-to-Face	62.3	88.2	+25.9
Online	70.5	86.3	+15.8

Figure 4.11. Mean confidence in responding to safeguarding concerns (pre- and post-training) by cohort over time



4.2.4.2.2 Understanding of Safeguarding Issues

The picture was similar for trainees' understanding of safeguarding issues with a higher baseline position for the Online cohort but with very similar levels of confidence post-training for all three cohorts. The difference between pre-training and post-training was not significant for the Online cohort. The difference between pre-training and post-training was significantly different for the Virtual and Face-to-Face cohorts Further, there was a significant difference found at the pre-training level, with the Online cohort reporting higher confidence levels than the other cohorts. At the post-training level there was no significant difference in confidence levels found between the cohorts.

Table 4.16. Mean confidence in *Understanding of Safeguarding Issues* (pre- and post-training) by cohort

Cohort	Pre-Training Mean	Post-Training Mean	Change
Virtual (VLE)	33.8	40.5	+6.7
Face-to-Face	34.2	40.7	+6.5
Online	38.5	40.1	+1.6

Figure 4.12. Mean confidence in *Understanding of Safeguarding Issues* (pre- and post-training) by cohort over time



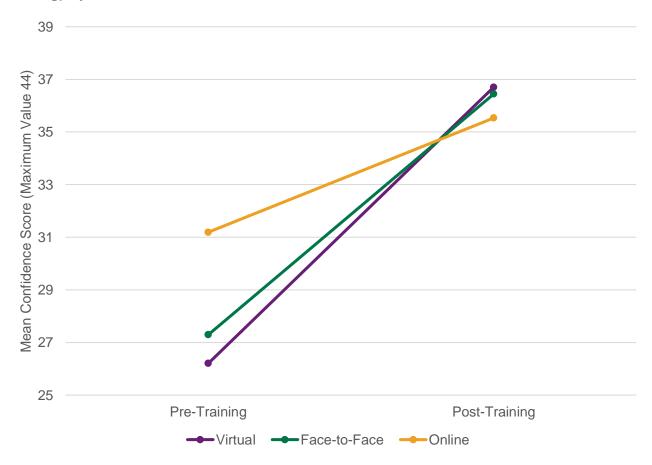
4.2.4.2.3 Recognising Safeguarding Issues

Recognising safeguarding issues offered a similar picture, with the Online cohort having slightly higher pre-training confidence than the other cohorts. However, the analysis found that there was no significant difference between the cohorts at the pre-training level, and no significant difference in mean confidence level between the cohorts at the post-training level. There was a significant difference for all three cohorts between the baseline pre-training score and the post-training score.

Table 4.17. Mean confidence in Recognising Safeguarding Issues (pre- and post-training) by cohort

Cohort	Pre-Training Mean	Post-Training Mean	Change
Virtual (VLE)	26.2	36.7	+10.5
Face-to-Face	27.3	36.4	+9.1
Online	31.2	35.5	+4.3

Figure 4.13. Mean confidence in Recognising Safeguarding Issues (pre- and post-training) by cohort over time



4.2.6 Knowledge of Safeguarding

All the participants during their training had to pass two in-course multiple-choice assessments to complete the training. To provide initial findings on the potential effect of the training type on knowledge retention, the survey included 10 items from these two assessments. It is important to note that these ten items were single response across a broad domain of safeguarding issues and were from the original assessment provided by UK Athletics as part of the training courses. To undertake the analyses, participant responses were recoded into new quiz score variables, with correct responses provided with a score of 1 and incorrect responses coded with a 0. These variables were then combined into an overall quiz variable by adding the values of the quiz scores to provide a total score out of 10.

Table 4.21. Mean safeguarding assessment score by cohort

Cohort	Mean	Minimum Score	Maximum Score
Virtual (VLE)	9.2	7	10
Face-to-Face	8.9	5	10
Online	9	7	10

Overall, no significant difference was found between the cohorts in the average scores, indicating that there was no or little impact of training type on the retention of safeguarding knowledge provided in the training courses.

While there was no *significant* difference, it is important to note differences in the minimum scores achieved on the assessment questions: in the Face-to-Face cohort the lowest score achieved was 5 out of 10, in comparison to the minimum scores of 7 out of 10 for the Online and Virtual cohorts.

4.3 Summary of Questionnaire Findings

- The findings demonstrate that participants underwent changes in all items between pre- and post-training surveys responses.
- Questions of understanding showed less movement between pre- and post-training in the Online cohort compared to the other two cohorts.
- The starting point or pre-training position for the Online cohort is higher than the Faceto-Face or VLE cohorts across all three safeguarding domains (*responding*, *understanding*, *identifying*)
- The training effect on confidence (or self-efficacy) across all three domains is positive
 for all three cohorts. All increases were significant, except for the *understanding*element of confidence for the Online cohort, where no significant difference was found
 between pre- and post-training.
- All three cohorts indicate very similar levels of confidence following training, across all three domains. There was no significant difference found at post-training for confidence levels across all three cohorts and components of confidence.
- The total training effect for the Online cohort is substantively less than the effect for Face-to-Face and VLE across all three domains.

5. Participant perceptions of UKA Safeguarding Training: Qualitative analysis

5.1 Participant interviewees

In order to explore the perceptions and experiences that were captured by the survey data, qualitative interviews were carried out with a convenience sample of UKA safeguarding course participants. All interviewees had undertaken Face-to-Face or Virtual safeguarding training as part of a UKA entry-level coaching course: either the Leadership in Running and Fitness (LiRF), or the Coaching Assistant (CA) course. At the time of the interviews, all but one of the participants had also completed the supplementary UKA online safeguarding module, either prior to or following their Virtual /Face-to-Face training.

Volunteers from the Face-to-Face training cohort were recruited during course observations; Virtual trainees received an email request from UKA. Volunteers were contacted by the evaluation team within 7 days to be offered more information about the study, including assurances about confidentiality and anonymity, and for researchers to gain formal consent to an audio-recorded telephone or video interview. In most cases interviews took place within 14 days of the training.

Semi-structured interviews followed a schedule of questions to ensure that all themes of interest to the evaluation were covered but aimed for a conversational tone, allowing participants to discuss topics relevant to their experience of the safeguarding training. Recordings were transcribed verbatim and transcripts underwent an inductive analysis¹ to identify and characterise recurring themes.

A total of 9 interviews were carried out. Four interviewees had participated in the Virtual or Face-to-Face safeguarding training as part of the Leadership in Running and Fitness course during Autumn/Winter 2020. A further five had participated in Face-to-Face training sessions as part of the Coaching Assistant course, following the partial relaxation of COVID lockdown measures in April 2021.

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¹ The general inductive approach provides an easily used and systematic set of procedures for analysing qualitative data that can produce reliable and valid findings. ... it provides[s] a simple, straightforward approach for deriving findings in the context of focused evaluation questions' (Thomas, 2006: 237).

Table 5.1. Trainee interview participants

Participant	Course*	Training Mode	Online Module
P1	LiRF	Virtual	Yes
P2	LiRF	Virtual	Yes
P3	LiRF	Virtual	No
P4	LiRF	Virtual	Yes
P5	CA	Face-to-face	Yes
P6	CA	Face-to-face	Yes
P7	CA	Face-to-face	Yes
P8	CA	Face-to-face	Yes
P9	CA	Face-to-face	Yes

*LiRF: Leadership in Running and Fitness CA: Coaching Assistant

5.2 Themes emerging from the trainee interviews

Analysis of the interview transcripts identified a range of factors potentially influencing the trainee experience of the UKA safeguarding training. These can be characterised as:

- Individual-level factors
 - Prior experience and perceptions of safeguarding
 - o Individual learning preferences
- Online learning benefits and drawbacks
 - o Accessibility, convenience and flexibility
 - Learning, interaction and engagement online
- Face-to-face and Virtual learning benefits and drawbacks
 - Trainee interactions in depth engagement with learning
 - o The role of course tutors
- The learning environment
 - Technology
 - o Course timina
- Impact and outcomes
- Advantages of a blended approach

5.3 Individual-level factors

5.3.1 Prior experience and perceptions of safeguarding

The majority of course participants had some prior experience of safeguarding. For most this was through current or past employment, including working in the NHS, teaching, social work and the military. Others had knowledge of safeguarding through voluntary roles either within or outside sport. One participant had previously held a role as welfare officer within their athletics club, and four of nine had undertaken formal safeguarding training. Two claimed no prior knowledge or experience.

This diversity of knowledge and experience among those undertaking UKA courses was recognised by interviewees, who commented on variation within their own training peer group. Several made reference to the wide range of background experience and 'different

levels of understanding' (P6) among those undertaking the courses. Some, who had extensive past experience, commented on others' lack of awareness:

Through the course I realised how much out of touch a lot of people are of safeguarding. There seems to be a lot of people who didn't know much about it beforehand. (P2)

There was an appreciation that safeguarding training was 'extremely important' [P4] to protect vulnerable participants, but also to protect volunteers and coaches from accusations and ensure that their behaviours were not open to misinterpretation:

I don't ever want to be in a position where somebody can say to me, "We think you're doing that." I'm very conscious of it. [P6]

In this context, even interviewees with extensive safeguarding experience were happy to undertake additional training for a new role, recognising both the need to ensure a universal minimum level of training within athletics and the value of refreshing knowledge:

It's covering the same thing again, it's like going through a procedure, I feel like the governing body has to implement this...I think again it's just consolidating, refreshing the mind. (P9)

5.3.2 Individual learning preferences

Individual preferences for learning influenced participants' learning experiences. They often referred to their own personal preferences, attributing this to a range of factors including age ('I'm an old man, almost 76'), learning style, and the familiarity (or conversely, novelty) of the learning mode.

I am a person that likes the visual ... but I also like to learn from the written word. [P5]

Personally, I'd go face-to-face... I think it's just a better environment for me personally 'cause I learn and...feel more immersed in it, I take in more and I listen more in that environment. [P9]

I think I'd prefer face-to-face...partly because I spend most of my days staring at a screen – so that's specific to the current situation [COVID pandemic] I suppose. [P3]

Interviewees were aware of the fact that some of these factors may be distinct to their individual preferences and circumstances, and might not generalise more widely to other trainees. In contrast, other advantages and disadvantages of different delivery modes were identified as being more universal. The online module, virtual classroom, and face-to-face training were all perceived to have their own benefits and limitations, which showed substantial consistency across interviewees.

5.4 Online learning benefits and drawbacks

5.4.1 Accessibility, convenience and flexibility

A strong theme around the accessibility, convenience and flexibility of online learning emerged strongly in trainee interviews. The self-guided module that individuals could do from their own home and at a time and pace of their choice offered the most flexibility. Doing the training at a time that was 'convenient' [P8] was valued, and several interviewees mentioned other commitments in their lives, such as work and family, that compete with participation in training.

It meant that I could do it when I chose to do it rather than having to set some time aside and be available for a certain time. I just felt it was easier because it was more accessible for me because I work full-time. [P4]

You can do it in your own time, you don't necessarily have to like travel somewhere which I think is sometimes unnecessary. [P8]

Another valued characteristic of self-guided, online, learning among trainees was the opportunity to take the training at a preferred pace, going back to 'revise' [P7], or consolidate learning where needed:

It was nice... I can do it at my own pace, and I can then stop, reinforce the knowledge that I'd learnt, go back... and just move around a little bit. [P6]

There was also a sense that the online module offered a 'less pressured environment' [P2] to absorb and test knowledge and understanding, without a perceived need to perform in front of others.

5.4.2 Learning, interaction and engagement online

While appreciating the convenience of online training, participants felt the depth of their engagement with the subject matter in the online module might be lower and for some the training could be seen as a 'tick-box' exercise:

Face-to-face... you're forced to think deeper about the questions in the topic, whereas online...it's more, what do I need to do this as quick as possible to pass the course. [P9]

The main perceived drawback of the online module was the absence of interaction with other learners and tutors, themes that were developed further when participants were discussing the advantages of Virtual and Face-to-Face training.

The only thing online is the fact that you don't get that interaction with other people." [P8]

"If you don't have a classroom type thing, you can't ask questions... there is a need sometimes to ask questions. [P4] Nonetheless, those participants who commented on their perceptions of the content and quality of the online module were very positive about the engaging and relevant material:

I thought it was really good, actually. It was probably the best safeguarding module I've done. Yeah, they were informative and they were quite engaging, kind of made you actually, like, think... really well put together. [P9]

The resources are very good. So there's a lot there to go back to. I think that's important, that you've got access ... [P2]

5.5 Face-to-Face and Virtual training: Common benefits and drawbacks

Face-to-face coach education has traditionally been the most popular form of delivery although virtual modes are increasing. The Virtual training mode, while initially instigated by UKA as a stopgap response to the inability to conduct face-to-face training during the COVID pandemic, emerged as an approach with a distinct profile of positive and negative features for learners.

5.5.1 Shared learning and interactions with peers

A feature common to both the Virtual training and the Face-to-Face safeguarding training is the experience of real-time interactions with peers. The opportunity to interact with other learners emerged as a powerful theme and contributed to positive perceptions of both the Virtual and Face-to-Face training.

Several participants referred to a deeper engagement with the material that was encouraged by interacting with others on the course.

You're forced to think deeper about the questions in the topic. [P9]

The thing about learning is interacting, that's the key. The more you interact, the more your brain tunes in [P1]

Sharing the wide range of experiences and perspectives that emerge within a group was perceived to be both enjoyable and beneficial, and this was an area of full agreement across all the interviews.

Because we were all from different backgrounds... when we're in a situation and we're asked how we would respond, there were different scenarios and different examples that came out of people's experiences. So that was interesting. [P5]

People may have situations which they can say 'well I had this awkward situation and I wasn't sure'... Real-life experiences are sometimes quite useful to learn from. [P4]

... it's nice to hear how other people would deal with the same situation compared to yourself. [P6]

Overwhelmingly, the value of learning with others emerged strongly from the interviews and was highly valued by course participants. As the vignettes from transcripts of Virtual training illustrate it is very difficult to see how the individual experience of a self-directed online/elearning course would be able to replicate this level of active engagement in the substance of the topic area. There is a significant pedagogical benefit to be had when sharing views, concerns and experiences with others in real time compared to working independently through a pre-prepared package of information and tasks.

While both Virtual and Face-to-Face training was perceived to offer this benefit, there was a general perception that interaction and shared learning 'might be a little bit better in a classroom environment' [P2]. Reference was made to the potentially 'awkward' atmosphere of a virtual classroom in a situation where people do not already know each other [P4]. In comparison to Virtual training, face-to-face training was perceived to create a more conducive environment for connection between participants, whether this was casual chat and 'gossip' [P1] or more focused networking.

I don't think you get the same network opportunities that you would get if you were standing around a tea urn ... during one of the breaks. [P4]

I would always say together in an environment, so you could pick up body language, you could pick up nuances, you could pick up relationships that you can perhaps say, 'Well I'll pop over in [city 1] and see what you're doing at your club.'(P1)

One participant observed that explicit encouragement and invitations to network and build connections could be a valuable addition to learning through the virtual classroom.

That might be a really good tool to have made, perhaps given the opportunity for us to network. We can encourage each other when we all start doing our roles. I don't think there was that networking element and I think that would be quite useful. [P2]

Learning Vignette 1

The extract below, taken from a transcript of a recorded Virtual training session, illustrates the interactive and collaborative element. This vignette shows the dialogue between participants in a breakout room after being asked to discuss: 'barriers to disclosing' and 'poor practice':

Female#1: So what about poor practice? ... 'turning a blind eye' and allowing it to happen?

Male#1: Yeah, yeah, I think that's a great point. [pause] It's [safeguarding] a subject that really makes you think.

Female#1: Yeah, because there's so much to it,

Female#3: mmm [utterance of agreement]

Male#1: Is there also - where you think something's there but you're not 100% sure, so you daren't say anything in case it isn't, for fear of upsetting someone ...

Female#1: Exactly, you have to tread so carefully.

Male#1: Yeah, your instinct says, 'this isn't right' but actually, there's a fear of getting involved – 'Is it any of your business?' ...

Female#1: Yeah

Male#1: ... do you cause more problems by calling it out? For that individual or for yourself?

Female#4: And I think it's sometimes knowing what to do with that information as well isn't it. Because as soon as it is out there, you have got to act on it, and that's quite a big thing I think as well - it's knowing the right place to go to sometimes isn't it? If you don't know the processes, or it's not clear within your organisation where it goes - and sometimes it's not clear is it?

Female#1: One of the things that [Instructor] just said - it was about the emotional abuse, where there is bullying, you know, where people are calling someone stupid. That's something I haven't ever really considered as a safeguarding issue. That sounds stupid but to actually turn around to someone and say, 'you shouldn't say that because it's not nice' - you might have someone turn around and say, 'oh come on! I didn't mean anything'. So just him saying that has opened my eyes to something that I wouldn't have ever thought about.

Instructor: ... what other examples of poor practice could you think of?

Female#4: ... like sort of pushing them harder when they're training as well. So, for instance if a parent is quite competitive and pushes them - if the coach then backs up that kind of, hard attitude towards things, that's only going to embed it further I suppose.

5.5.2 Role of the tutor in Face to Face and Virtual learning

Having the support and input of a tutor was perceived to be a substantial benefit of both Virtual and Face-to-Face training in comparison with the online module. In addition to the basic delivery of course content, the tutor's role was perceived to be to contribute their

knowledge and 'expertise' [P8] to the discussion, speak from personal experience, and prompt a deeper consideration of the issues through facilitating discussions.

...they could sort of confirm what's okay and what's not and why [P7]

It was motivational having him, you know, a leader like that. [P5]

They can further elicit information from you and make you think deeper about the topic which is beneficial. That's what they bring, that expertise to actually just kind of assist and talk through it a bit more and actually I suppose [pause], kind of intervene in some ways [P8]

Tutors were also seen to have an important role in ensuring smooth delivery of course material, facilitating learner engagement with the course, and providing an environment that is safe and conducive to learning was strongly endorsed by trainees.

In contrast to other training courses, safeguarding was viewed as a sensitive topic, and interviewees identified the need to deliver this content in such a way to create a safe learning environment. The tutors' role in fostering a non-judgemental and encouraging learning environment, and to create an atmosphere of open discussion was highlighted.

...They [tutors] said, 'We used to put the wrong answer in so don't worry about it,' and I thought that was really helpful because if you weren't quite sure you weren't ... put out on a limb. [P1]

A few participants referred to potential drawbacks to the group approach to learning in the field of safeguarding; particularly where participants are uncomfortable either with talking in front of a group, or with the sensitivity of the subject matter.

I can see how, for some people, that may be a difficult situation, talking in an open group - that could become uncomfortable for some people, I guess. [P9]

The potential to cause distress or trigger previous traumatic experiences was identified.

One person almost dropped out of the conversation, but you don't know when you're dealing with safeguarding – what peoples' experiences are [P1]

Keeping learners on topic and sticking to the content and timeframe of the course was identified as one of the challenges of the face-to-face provision. As one trainee highlighted, in a shared learning environment a vocal individual can dominate discussions and interfere with the delivery of course content.

That can be really annoying because someone may take over a class and ask all the questions and you're just thinking 'oh get on with it'. [P8]

In the Virtual training in particular, the benefit of having two tutors was highlighted, in order to iron out technical glitches, raise issues emerging from the chat and engage with different groups during the breakout group activities.

In general, where participants commented on the quality of interactions with their tutors, perceptions were positive, characterising course tutors as knowledgeable and engaging.

They knew the subject, they knew how to present it, and they kept it interesting for everybody. [P6]

So there were two of them and they were excellent ... [P1]

Learning Vignette 2

This extract shows the summary given by a spokesperson, to the larger training group, following a breakout discussion of: 'best practice' and 'barriers to recognising and reporting abuse'.

Male participant:

So, we had some really interesting discussion, using our collective experience. And we thought, for best practice, it would be about reporting and signposting, and knowing where to go. And having that sort of open and honest approach, in terms of setting that out from the start for everybody. And also, best practice in terms of non-tolerance of any form of abuse within your club, and being very transparent about that - if it's a new group you are starting or if it's new members who are joining. But equally, acknowledge that if things do need reporting, that we will be there and signpost people in the right direction. And ... in terms of best practice ... not saying 'whatever you tell me is going to remain between the two of us' and acknowledging up front that that's something that you are, well potentially, going to have to share. Because if we think about it, it's a massive step that people have made to, you know, to talk to you about it. ... so be open and honest about that, in terms of framing confidentiality. And also, the barriers to recognising and reporting. The biggest barrier - we were just getting onto this - in terms of, if you know the potential abuser, or the potential person who had been implicated, that can be, you know, a big barrier.

As noted above, the qualitative difference between the experience of working independently through a pre-prepared package of information and tasks, compared to sharing views, concerns and experiences with others (with shared interests) in 'live' conversation, seems hard to overstate in terms of the pedagogical benefits.

5.6 The learning environment

5.6.1 Technology

Several aspects of the learning environment had an impact on participants' experience of the different training modes. Interviewees were asked specifically about the accessibility of technology required for the online module and the Virtual training.

Completing the online module, several participants had experienced minor difficulties finding the course, navigating through it [P4] and recording their completion of units [P9] but all agreed that it was generally straightforward, and these experiences were unique to the individual participant rather than being widespread difficulties.

The video conferencing used for the Virtual training was found to be easily accessible. Minor technical glitches were reported, affecting either the interviewee themselves or their fellow participants but most recorded no difficulties with the Virtual classroom technology. The few problems that were identified were mainly linked to using the 'chat' function. One participant was unable to use the chat function which he attributed to accessing the training on a tablet [P1]. Others described some teething problems among the wider group and it was suggested that the chat function may have been unfamiliar even to those used to using video-conferencing for work and social purposes.

The chat box... was the technology that's probably new. If I use Zoom for work..., I don't really use the chat box in that setting either. [P2]

Certainly just to begin with maybe for the first ten, fifteen minutes of it, I think people were finding it difficult to get to grips with [the chat function]. [P3]

5.6.2 Time Factors

Several participants made reference to the timing on the safeguarding training. It was felt that by the end of a long day of training, whether Virtual or Face-to-Face, time was too short, and participants too tired to give the course the energy and attention it required.

Because it's all condensed up... it was difficult to get your brain from one to the other. It needed perhaps just a little bit more space to then change the tone [P1]

I think a little bit longer would have been useful. Not a lot more but I think you could have done with a few minutes more because ... you're talking to people you've not spoke to before. You've got to get conversation and people comfortable before you actually get into the topics a little bit. [P2]

The face-to-face...we only had a day for the coach training as well, so it was kind of a little bit rushed at the end. It kind of gives the impression that it didn't matter as much, if that makes sense. [P7]

I think with the safeguarding the problem was there wasn't enough time...to really interact with each other, on such a difficult topic like that. [P1]

UKA education leads originally planned the safeguarding training to be delivered in the middle of the day. However, for reasons of efficiency due to COVID rules and restrictions, this was changed to the end of the day. Clearly there are always a range of factors to consider when scheduling a full day of training and it is unlikely that there will be a particular time of day that will suit everyone. However, this is something that UKA may wish to consider further to ensure that timetabling is maximising the learning opportunity.

5.7 Impact and outcomes

All trainee interviewees felt that the safeguarding training had been valuable, and effects on knowledge, skills and confidence were reported in several areas of development.

Interviewees described effects on their knowledge of the range of types of abuse and poor practice. This was particularly the case where emotional abuse and neglect are involved as these were felt to be more easily overlooked than physical or sexual maltreatment. Several interviewees reported feeling more 'confident' [P3] to recognise signs of abuse. There was also increased confidence to raise concerns and an improved knowledge of reporting pathways.

I found it quite useful because there were some bits where, I mean I didn't realise what could be counted as abuse and stuff like that [P4]

I hadn't really thought too much about it, about neglect and emotional behaviour and all that sort of thing in sports. But, as I said, it's certainly made me think about these things and being more aware of them. It's given me more information of what to look out for and also how to handle things. [P5]

For those interviewees who had more substantial prior experience of safeguarding training, the benefit was to consolidate and refresh knowledge. In particular, the training helped translate the knowledge they had gained in other spheres of life to the specific area of athletics, highlighting, for example, the risks of overtraining.

For those whose safeguarding experience was from past roles it was also seen as valuable to ensure that their knowledge and awareness was up to date and in line with current standards and expectations.

I think it just brings back, cements knowledge, consolidates previous knowledge, reminds you of things and keeps you up to date on things which I think, with the topic of safeguarding, isn't a bad thing. [P8]

There's certain things where, well, stuff certainly used to be sort of acceptable in society where it's not now. So it's kind of learning that, you know, it's not okay anymore. It wasn't really okay then either, but it's not accepted now, certainly not. [P7]

Interviewees were asked whether the training had had any effect on their actual practice as coaches. For all the interviewees, coaching activities had been substantially curtailed during the COVID pandemic, and so their opportunities to put their learning into practice were limited. One referred to the fact that he would be more 'athlete-centred' in his practice with a greater focus on athletes' own aims and priorities.

You've really got to be thinking about them and what they want out of it. It's not what I want as a coach. [P8]

Learning Vignette 3

The extract below is taken from one 'Virtual' training session. It demonstrates that whilst those in the athletics (or wider sport) community may have significant experience in safeguarding issues, they may not easily recognise or appreciate the value or relevance of that knowledge within their sport setting.

I have a little bit of knowledge - not necessarily in an athletics capacity - but I have an Advanced DBS, as a mentor, again a voluntary role, with [organisation name]. I look after or I mentor a particular individual. They're from a very disadvantaged, challenging background - all sorts of horrible abuse and things that we don't see normally. A completely tragic world that they are in. How relevant that is to athletics, I'm not sure. But we have to be aware of certain things, and in terms of being comfortable about reporting things that you see or observe, or changes in a particular child, then we have certain protocols that we have to follow - we report that in. So, I have no issues whatsoever in making those observations and reporting what I do see. But again, it's just trying to take it through to what relevance that has to my running club ..?

Similarly, the following extract illustrates that strong safeguarding knowledge in another sector or field should not be taken to indicate a good understanding of safeguarding processes and procedures within sport generally or within a specific sport:

Instructor:

Okay does anybody want to share anything they were talking about ..?

Participant:

I was just saying that I know quite a lot about safeguarding through work. We renew training every year through the [area of employment], but if anything came up at the running club that I lead, I wouldn't really know who to go to in the community with any concerns.

This emphasises the importance of training that situates the problem of abuse and maltreatment within the sport setting and offers contextualised learning in safeguarding that is both relevant for the learner group and enables or encourages them to 'activate' their knowledge or expertise within the sport setting. The benefit of this is illustrated in the extract below from a training participant:

...it made me reflect back on to athletics again. So, the basics of child protection I know, basics of child welfare I know - but it enhanced it by placing it in context of what we were doing... [interviewee, P1]

5.8 Advantages of multiple approaches

Given the important role of individual preferences, and the different benefits of each delivery mode, a training offer that included multiple approaches was mentioned by many participants, either to accommodate the individual learning styles and preferences described above, or to provide opportunities to revisit and consolidate learning through multiple training instances. Five of the nine participants expressed a preference for a blended approach which combined a self-guided course followed by a more interactive, discussion-based element. The timing of these two elements was felt to be important, to allow knowledge to be refreshed and strengthened without too much redundant duplication.

I'd like to see stuff online, read about it online as pre-work and then go to a face-to-face thing for an hour or so or whatever and then do the stuff that you can't do online and do some of the more discussion based stuff. ... So probably some kind of blended approach of all of this stuff is probably the way to go really. [P3]

I am a person that likes the visual as well, but I also like to learn from the written word and be able to look at it again and look at it again. So I'm both, you know? I'm both. Yeah, a combination is good [P5]

That's why I think doing the session at the end of the course was really good, because it gave you that confirmation that what you'd learnt in the online bit. [P9]

So I think the online side of it is really useful, but I don't think it should just be standalone. [P1]

5.9 Summary

Although all interview respondents had participated in an entry-level UKA coaching qualification, they were a diverse group in terms of background, experience and age. Some interviewees had extensive experience of safeguarding through their employment, and some had already undertaken safeguarding training in relation to other sports or elsewhere in the voluntary sector. Others were entirely new to the concepts and principles introduced in the training course. There is a substantial challenge for UKA to provide training that can engage and challenge those with safeguarding experience, while also providing an accessible introduction to those with no previous experience. There was, however, a high level of acceptance among those with more experience that a baseline introduction should be embedded within all UKA coaching courses to ensure a minimum level of safeguarding awareness. For those with background knowledge there was also an appreciation of the value of refreshing existing knowledge and athletics-context specific training for all.

Participants were, in general, very positive about the content, coverage and delivery of the training they received. The majority had experienced both the self-guided module and one of the tutor-led (Face-to-Face or Virtual) courses. Many appreciated the convenience of the

online module, and the benefits of learners being able to choose that time, place and pace of their learning. The benefits of the deeper engagement provided by the interactive (Face-to Face and Virtual) approaches to learning were, however, also very highly valued by trainees. The opportunity to engage and reflect by discussing, questioning and sharing experiences was perceived to create a more meaningful learning opportunity, through the exchange of ideas and the co-creation of knowledge. As noted in the review of literature, through interaction, communication and discussion, active learning and critical thinking are more likely to occur (Piccoli, Ahmed & Ives, 2001; Pavey & Garland, 2004). Vignettes from the Virtual learning observations demonstrate how this more interactive approach facilitates deeper engagement with the content, reflection and shared creation of knowledge. Interviewees were unanimous in valuing the discussions that emerged within the Virtual and Face-to-Face training, in what was perceived to be a complex area, presenting substantial risks to both vulnerable participants and coaches.

The COVID pandemic was a theme that emerged frequently within the interviews. The virtual classroom approach was introduced by UKA as a way to provide interactive, tutor-led training while maintaining the social distancing required to address the 2020/21 pandemic. However, the Virtual classroom approach emerged as a unique approach with its own profile of benefits and drawbacks: sharing some of the convenience benefits with the online module, and some (slightly attenuated) interactive benefits of Face-to Face training. The use, understanding and acceptance of online interaction was dramatically increased during the COVID pandemic, for both social and employment purposes, and this increased use of online interaction may have enhanced participants level of comfort with video-conferencing technology. In any case, even where a Virtual approach was not preferred by participants, it was still perceived to provide an environment where deeper engagement with the course material was facilitated.

A theme that emerged strongly within participant interviews was the perceived importance of safeguarding training among trainee coaches and the need for this to be reflected in the timing, and time-allocation to this area of development. Most interviewees had experienced tutor-led safeguarding training towards the end of a long day of (LiRF or CA) coaching training, and several commented that the timing of the training may not have allowed full engagement among course participants. For Face-to-Face trainees, the fatigue issue may have been exacerbated by the COVID restrictions which meant that breaks in the training were kept to a minimum to avoid unnecessary social mixing. Nonetheless, this indicates a strong appetite for a safeguarding training within the entry-level UKA coach trainee cohort.

6. Conclusion

The reviews of literature and analysis of both trainee, trainer, and key stakeholder perspectives demonstrate the range of issues to be considered in relation to the choice of delivery mode for safeguarding training within the context of athletics and wider sport.

The analysis of the survey data clearly shows that participants on the UKA safeguarding training, regardless of delivery mode, experience increases in confidence in safeguarding-specific knowledge, whilst levels of course satisfaction and achievement of learning outcomes are also high across all modes.

Therefore, the comparative evaluation did not indicate a clear difference in relation to the three training modes in terms of efficacy. In all training modes, there were statistically significant increases in confidence across three key dimensions of *understanding*, *recognising*, and *responding* to safeguarding issues. We do not, therefore, recommend one form of training over another for all learners on the basis of the analysis of survey data. This finding should provide some assurance for UKA and other agencies that their online safeguarding training is generally meaningful and effective for their membership.

However, it is important to note that increases in self-perceived confidence were higher among the Virtual and Face-to-Face cohorts in comparison with the Online cohort in the category of *understanding* safeguarding issues. The results of the survey data analysis may thus indicate that the three training delivery modes may be differentially effective with different learner groups.

Coupled with the qualitative data and our review of peer-reviewed research literature, we conclude that the collaborative and discussion-based elements of the tutor-led training (Virtual and Face-to-Face) are especially significant in raising learner confidence and are particularly important for those with low levels of confidence in safeguarding prior to training.

In offering this finding, we also point to some important issues that we highlight below.

6.1 Response rate

The pre-/-post methodology aimed to ensure a robust evaluation. However, this approach placed a burden on participants to complete two questionnaires in addition to the work for their qualification. For some this proved too onerous and the number of matched responses finally received was substantially lower than desired. Therefore, the statistical analyses must be treated with some caution.

6.2 Activation of knowledge

The proportion of participants who felt they had learned something from the activities within the training was very high across all three modes, however, this effect was lower in the Online cohort, especially for those who had previous training experience. The qualitative data indicates, even for individuals with significant previous experience and knowledge of safeguarding, there is a recognition that they require support to *activate* or contextualise this knowledge within the specific setting of athletics.

6.3 Maturity of training intervention

The training involved a newly developed training module facilitated via two different modes (Virtual and Face-to-Face) by tutors who were delivering this material for the first or second time. The training content was designed by experienced coach education professionals, approved by the CPSU, and delivered by tutors who had received specific training prior to delivery. As indicated in the analysis of learner perspectives, the tutors who delivered the training were highly valued and assessed very favourably by learners. However, this is not an ideal situation for assessing the effectiveness of training interventions as it is reasonable to assume, as in all education/training interventions, that there would be a period of reflection, revision and adjustment following early delivery of modules, at both individual and organisational levels. Indeed, reflection on delivery and how the VLE space could be best used was evident during recorded observations of the Virtual training. Therefore, tutor competence, confidence, and skill development, and, as a consequence, participant Reaction and Learning (Buckley & Caple, 2009) could be assumed to increase as the course 'bedded in'. Therefore, following our observations of the Face-to-Face and Virtual training, we consider it likely that during the period of the evaluation, the potential of these new 'live' modules was not fully maximised. It also appears to be critical to ensure high levels of fidelity and frequent monitoring of the standard and quality of the delivery of Face-to-Face and Virtual modules.

Given the very positive performance of these new modules in relation to self-efficacy, this should provide UKA with some assurance that gains in learner confidence and their experience of the training are likely to improve as the course becomes more established.

6.4 Focus and limitation of evaluation

The evaluation reports on self-efficacy in relation to confidence levels across three key dimensions, but it did not examine *if*, or *how*, learning was actually translated into the participants' sports practice or volunteering work. Further evaluations might usefully track the learner journey through to application of knowledge *in situ*. This would enable a clearer assessment of the value of safeguarding training to the sector as well as provide important information on the needs of volunteers in the athletics/sport community in relation to safeguarding.

As indicated in the Methodology chapter, response rates to the online questionnaires were substantially lower than desired. Follow-up email requests were distributed to all cohorts. However, due to delays caused by COVID, the Face-to-Face training was confined to one weekend towards the very end of the project with no further opportunities for data collection, just 8 weeks before the final report deadline. In these circumstances, it was of paramount importance to maximise the response rate of training participants. Therefore, senior UKA tutors attended all the Virtual training sessions (and some Face-to-Face training sessions) and all Face-to-Face sessions were attended by a member of the research team in order to promote the need to complete the post-training questionnaire. It is not possible to assess the impact of this on learner perspectives, but the possibility that there was an impact cannot be discounted.

It should also be noted that that the qualitative interviews captured Virtual and Face-to-Face modes only. Whilst both modes contained an element of online content, qualitative data was not collected from the Online cohort.

6.5 Discussion-based Learning

Those participants who had experienced training containing both a tutor-led training session and a self-directed online element, frequently felt that both elements were important, but that the 'live' element was indispensable given the opportunities to check understanding as well as for discussion.

The clear distinction between the self-directed Online training and Virtual/Face-to-Face training is the discursive and collaborative dimension. From the interview data, and also our observations of these two modes, it is clear that training participants and tutors are actively collaborating in their individual and collective learning. The sharing of knowledge and experience is something that participants clearly valued and group discussion (in response to tasks set by tutors) enabled a dynamic and creative space that encouraged active participation.

Whilst such a space may create the possibility for transmission of myths and misunderstandings around abuse, it does so in a space where 'ground rules' for communication are clear and monitored; and where guidance and expertise are on hand either from tutors, or via additional learning resources, or from peers with first-hand experience of specific areas.

Crucially, these formats allow for and encourage context-specific discussion to occur. We argue that this contextualisation of safeguarding education is essential and that facilitating learners to draw on context-specific examples and experience is more likely to enable them to make connections between theory and practice and enable them to apply learning *to* practice.

We also argue that this dynamic dimension is more likely to engender a positive approach to safeguarding that will assist further in the embedding of safeguarding principles and practice into the 'normal' activity of the coaching and wider athletics (and sports) community. We also suggest it is more likely to undermine the sense that safeguarding is a separate realm from the main business of sports coaching and sports participation and, therefore, the responsibility of the few rather than the whole community.

6.6 Advantages of multiple approaches

The responses from trainers, stakeholders (in athletics, and sport more broadly), and UKA learners themselves, clearly acknowledge a range of benefits to each form of training.

Given the important role of individual preferences, and the different benefits of each delivery mode, a training offer that included multiple approaches was raised by interviewees. Such an approach would enable accommodation of individual learning styles and preferences, and provide opportunities to revisit and consolidate learning.

6.7 Final Conclusion

In this comparison of introductory safeguarding training for athletics, a significant learning effect was found in all three cohorts or modes of training (Online, Virtual, Face-to-Face). This effect was weakest in the Online cohort. In addition to the stronger learning effect found within the two tutor-led cohorts, tutor-led training was particularly effective where understanding of safeguarding was low or weak.

We found that self-directed (online) training is effective, but that tutor-led training ('virtual' or 'face-to-face') provides a dynamic, contextualised learning environment where the opportunity to discuss anxieties or ask questions is of importance to, and valued by, learners. Learners also recognise each approach has its strengths and that these support different learning styles and capacities.

Therefore, we conclude that a programme of safeguarding training that provides multiple learning pathways offers the most appropriate and effective approach and that tutor-led safeguarding training is a necessary and important feature of a robust safeguarding programme for the sport sector. We also suggest that tutor-led training is important for the embedding of safeguarding within 'normal' coaching practice and wider sports culture.

7. Recommendations

Based on the findings of this evaluation, we make the following recommendations:

- 1. Training providers should establish multiple training/learning pathways that provide both tutor-led training and self-guided online training.
- 2. Training for learners with little or no prior knowledge or experience of safeguarding in sport should include tutor-led training.
- 3. Training providers should ensure regular assessments of established training programmes to monitor fidelity of programme delivery and compliance with standards of delivery.
- Future evaluations should explore application of learning to practice and the extent to which self-efficacy translates into improvements in safeguarding behaviour and performance.
- 5. Training providers should consider measuring the return on investment from safeguarding training and assessing its long-term impact on children/vulnerable adults/athlete welfare.

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Appendices

Appendix A: Literature Reviews

Given the context of the evaluation, a review of current literature in the coach education field was undertaken and provided to UKA and the steering group. As noted above, as a result of the COVID pandemic, a third stream of training – a Virtual Learning Environment or Virtual Classroom – was added midway through the evaluation. Therefore, a rapid review of literature in this area was also undertaken and provided to UKA and the steering group. Both reviews are presented below.

Coach Education

Introduction

The education and development of sports coaches has been a longstanding area of interest for scholars and practitioners as it is believed to be the key to improved coaching (Woodman, 1993; Armour, 2010). Scholarship in this area has focused on the development, structure, and evaluation of coach education and development opportunities in search of a 'best' approach or the most 'effective' combination of approaches which meet the needs of coaches (e.g., Trudel & Gilbert, 2006; Mallett, Trudel, Lyle & Rynne, 2009). This work has highlighted that there are various ways coaches can learn (e.g., through formal coach education programmes, professional development workshops, mentoring, athletic experience) and their preferences for particular modes of learning depend on factors such as their level of coaching (i.e., recreation, developmental, high-performance) as well as the structure of the coach education training that prevails in the country (Callary, Culver, Werthner & Bales, 2014; Culver, Werthner & Trudel, 2019; He et al., 2018; Koh, Mallett, & Wang, 2011).

Before looking at literature on online coach learning initiatives, it is useful to briefly discuss the various education or development influences on coaches' development. This is followed by recommendations to be taken into consideration when developing learning initiatives for adults. The review then focuses on online education, the strengths, limitations and evaluation. Finally, the review acknowledges blended learning and its relevance to coach education.

Coach education and development

Much of the literature relating to coach learning draws upon Coombs and Ahmed's (1994) conceptual model of learning. This model divides learning opportunities into formal, informal and non-formal. A discussion of these learning opportunities shapes the content of this section. To begin, formal learning is 'something that takes place in an institutionalised, chronologically graded and hierarchically structured education system' (Coombs & Ahmed, 1994, p.8). Such approaches are comprised of compulsory attendance, standardised curricula that focus on coaching theory, sport-specific techniques and tactics, and coaching practice. Such approaches result in the achievement of a degree, certificate or 'badge' (Trudel & Gilbert, 2006).

Formal learning initiatives have been criticised for failing to meet the needs of those for whom development opportunities are aimed (Armour, 2010). Here, the literature suggests that coaches are not satisfied with these opportunities, suggesting that the courses are too narrow

in scope, are lacking in 'relevant' content or reinforce what coaches 'already know' (Jones, Armour & Potrac, 2004; Jones, Morgan & Harris, 2012). Furthermore, content is often considered either too basic (as in simple drills) or too abstract (as in bio-scientific content) (Jones et al., 2004), with coaches struggling to see the relevance of the course material to the reality of their everyday practice (Vargas-Tonsing, 2007). Also, as programme developers prescribe the design of the curriculum, content, method of delivery, assessment tasks, feedback and technical/tactical approaches, concerns have been raised as they may expose the coach to a single set of values and attitudes that the coach is expected to adopt (Cushion et al., 2010). Consequently, coaches learn, internalise and construct these values and behaviours, which results in the development of identical coaches who are homogenous, disciplined and versed in certain forms of knowledge but not in others (Lang, 2010; Lang, 2015). Coaches are unlikely to challenge the status quo for fear of failing the course so some may adhere to the values, attitudes and behaviours of the coach educators who facilitate the course, but upon completion, return to their original approach or practice (Cushion, Armour & Jones, 2003; Griffiths, 2015). Consequently, these courses have had relatively low impact on coach learning (Cushion et al., 2010; Mallett, Trudel, Lyle & Rynne, 2009). While these formal courses have received significant criticism, coaches with limited coaching experience and lack extensive knowledge of the sport may find the courses to be useful and gain greater awareness and understanding (particularly with the practical component). Further, these courses can ignite an interest or an enthusiasm for coaching and provide valuable opportunities to engage with other coaches. Overall, these programmes are viewed as a 'starting point' or 'minimum' in terms of coaches' learning, with increasing calls for the use of other forms of coach learning initiative which would more adequately prepare coaches (Mallett et al., 2009).

Often used in conjunction with formal coaching (or instead of), non-formal learning refers to 'organised, systematic, educational activity carried on outside of the formal system to provide select types of learning' (Coombs & Ahmed, 1994, p.8). These include coaching conferences, seminars, workshops and clinics (i.e., short courses that focus on a specific area) which are provided by 'knowledgeable others' (Mallett et al., 2009). Non-formal educational opportunities can address some of the shortcomings of formal education identified earlier as they have the potential to be highly varied, extensive and ongoing professional development. However, some programmes have been criticised for being short-term, voluntary and lacking prerequisites. In addition, the structure and content of some development opportunities have been criticised for attempting to turn coaches into 'compliance officers' as opposed to equipping coaches to be 'agents of positive change' (Patterson, Backhouse & Lara-Bercial, 2019). While non-formal coach learning initiatives have been widely adopted, learning from experience and from other coaches (informal learning) is still cited as the primary source of knowledge for coaches (Gilbert & Trudel, 2001; Mallett, Rossi, Rynne & Tinning, 2016; Mesquita, Isidro & Rosado, 2010).

Informal learning is 'the lifelong process by which every person acquires and accumulates knowledge, skills, attitudes and insights from daily experiences and exposure to the environment' (Coombs & Ahmed, 1994, p.8). These learning opportunities are usually unorganised, unsystematic and could be unintentional, however they account for a majority of a person's learning over the life course (Coombs & Ahmed, 1974). Examples of informal learning include: previous experience as an athlete, informal mentoring, practical coaching

experiences, and interaction with peer coaches and athletes. Given the relatively small amount of time a coach might spend in a formalised learning environment in comparison to the number of hours s/he spends in the sporting venue, coaching and interacting with athletes and/or other coaches, it is unsurprising that coaches place more value on informal learning (Gilbert, Côté & Mallett, 2006). Recognising the benefits of informal learning, coach educators have attempted to 'formalise the informal' by incorporating reflection, communities of practice and mentoring into their coach learning initiatives.

Coach education and adult learning

In designing opportunities for coach learning, it is worth acknowledging Tusting and Barton's (2003, p. 1-2) review of models of adult learning. Tusting and Barton (2003) caution that adult learning takes place in specific social contexts and for various purpose so a singular model of learning cannot be applied to every situation. However, there are key considerations that should be taken into account when designing formal learning initiatives. These recommendations address some of the criticisms of formal provision, such as failing to meet the needs of coaches (Armour, 2010), and would help to develop more meaningful coach learning initiatives.

- Adult learners have their own motivations for learning. This means that learners build upon their existing knowledge and experience and 'fit' learning to their own purposes. This suggests that if the coach learning initiative is linked to the needs and interests of the learners, they might be more motivated. As a starting point, it would be of use to highlight the value of such learning in improving the coaches' performance. The content of educational initiatives could also be tailored to the learner based on their existing knowledge and experience. It would also be beneficial to involve coaches in the construction of specific resources to ensure that they are relevant to their needs.
- Adult learners have a drive towards self-direction and becoming an autonomous learner. This suggests that learning is initiated by the learner. Therefore, if learners find themselves in situations in which others are imposing their ideas upon them, they may experience resentment and resistance (Knowles, 1984).
- Adult learners have the ability to learn about their own learning processes and benefit
 from discussions about it. This suggests that it is useful to create opportunities to for
 learners to discuss their experiences of learning.
- Adults can learn by engaging in practice. That is, learning is generated when people
 encounter problems and issues in their real lives and consider various ways to resolve
 them. To do this, it would be useful to draw upon the coach's experiences and assist
 them in connecting these experiences to new ideas, concepts and theories (Merriam
 & Bierema, 2014).
- Adults reflect and build upon their experience. Reflective learning arises out of the complexities of their own experiences. Learning is unique to each person. As such, reflective learning should be encouraged but given it is personal, there is no guarantee that it will happen.

Summary of the key points relating to coach education and development

The education and development of coaches has been recognised as essential to improved coaching (Woodman, 1993; Armour, 2010). Based on the aforementioned information, for

education or development programmes to be meaningful to coaches, they need to recognise the complexity of coaching practice and the diverse contexts in which coaches work and individuals with whom the coaches interact. Furthermore, consideration needs to be made to whether the education or development opportunity teaches (prospective) coaches content that they can and will use once they return to the field. This requires consideration of how the programme recognises what people already know.

In light of the strengths and weaknesses of the formal, non-formal and informal influences on coaches' learning and development, the blending of formal and informal coach education delivery might be the ideal way to educate/develop coaches (Turnridge, Hancock &Côté, 2014). In developing programmes for adult learners, Tusting and Barton (2003) highlight that the design links to the needs and interests of the learners, there is recognition that the learner is self-directed and autonomous (i.e. ideas aren't imposed on them), there are opportunities for learners to discuss their experience of learning, learning is generated through encountering problems and issues faced in 'real life' considering ways to solve them, and learners need opportunities to reflect and build upon their experience. To this end, coach educators should aim to create programmes that will enable coaches to 'move beyond existing practice, to innovate, to experiment, to adapt, to reflect, and to build underpinning knowledge and skills for the requirements of 'higher levels' of coaching' (Lyle, 2002, p.280).

Online coach education

Despite the extensive focus on coaches' learning and development, the value and 'effectiveness' of online coach education has received little attention (Driska, 2018). This is surprising given the increase in use of online learning platforms by coach education providers in various nations. Furthermore, there is limited scholarship that offers guidance on the design and implementation of online education programmes (Cushion & Townsend, 2018).

To clarify, the content and format of 'typical' online delivery includes interactive content, talking slideshows, video demonstrations, and/or video interviews with experts. The courses usually conclude with a quiz/exam of which a minimum score of 80% is required to pass. As the courses are delivered online, there are various technological challenges that may have an impact on the learner's experience. These range from the learner's computer literacy, accessibility issues, technology malfunctions, and access to and issues with wifi (Volansky, 2019).

Large-scale online coach education courses are often automated, assuming a didactic approach focused on delivery of knowledge and skills (Macia & García, 2016). However, in light of trends towards constructivism, that is, learning viewed as a social process in which learners construct new knowledge, there are courses which employ a more dialectic form of online learning which promotes discussion between users or between users and/or the facilitator and users. Although the discussions have the potential to stray from that which is productive and educational, it has been suggested that they allow for a more meaningful learning opportunity through the exchange of ideas and the co-creation of knowledge (Driska, 2018). Consequently, some scholars argue that some forms of online courses and in-person professional development can provide for comparable learning (Fishman et al., 2013).

Strenaths

There is consensus that online coach education offers a widespread, affordable, and convenient method to deliver a course to a large audience. Online provision also enables a

consistency of course delivery (i.e. time and content) which has been a criticism of the inperson format which can vary widely across instructors (Gilbert & Trudel, 1999). More importantly, online coach education also appears to suit coaches' current practice. Driska (2018) identified that coaches tended to access online sources when looking for resources and information. Related to this point, and of use when disseminating scholarship to coaches, work suggests that coaches wanted to receive information from academics in an engaging and accessible manner (Johnson et al., 2014). In this context, accessibility means that the information needs to be understandable and easy to retrieve (Strachan, MacDonald & Côté, 2016).

Limitations

In contrast, traditional online courses are often viewed as too impersonal with learners feeling remote and having little cohort identity (Street, 2010). Hewson (2014) noted that the difficulty in communicating and establishing rapport with participants is one of the most common disadvantages of online education and can limit the co-construction of learning. This not only had an impact on the learners, but it has also been identified that instructors missed the inperson teaching primarily because of the personal bonds they formed with students and the feeling of fulfilment when they could directly observe them struggling, learning and developing (Driska & Gould, 2014). The inability to observe and receive immediate feedback from students, thus making it difficult to know how well learners understand the content, was highlighted by Driska and Gould (2014). As such, they recommended the use of mini reflections via reflective journals and/or other small assignments and/or blogs for students to complete after they engage with the online content (Driska & Gould, 2014). In contrast to the typical standardised test used to evaluate learning, these reflective assignments required that learners not only engaged with the online content, but more importantly, comprehended it (Driska & Gould, 2014). It was noted, however, that participants might have written strategically and 'faked' reflection in order to fulfil the assessment requirements (Hobbs, 2007) as opposed to treating the exercises as an authentic mechanism for developing their practice (Cropley, Hanton, Miles & Niven, 2010).

Returning to the use of decontextualized standard tests as a way of 'measuring' or 'evaluating' learning, longstanding criticisms of these tests suggests they provide a too simplistic interpretation of the content and fail to cover complex contextual factors (Stake, 1985). In order to improve in their real-world practice, practitioners need experiential knowledge (Gilbert & Trudel, 1999). Towards this end, coaches have highlighted that central to effectively developing their knowledge and skills, education should provide them with opportunities to develop good practice through interactive and practical experiences such as case studies (Driska & Gould, 2014; Trudel, Culver & Werthner, 2013). It has been suggested by Driska (2018) that educational practices that can situate abstract knowledge within concrete scenarios may help to advance coach development. However, further inquiry into the mechanism of case study design in online coach education is needed.

Evaluation of online courses

The use of self-administered online programmes has appealed to learners (not specifically sports coaches) who have commented positively on the flexibility (without being a limitless commitment) of the programmes, the opportunity to go at one's preferred pace and repeat activities and/or review content (Bergviken Rensfeldt, Hillman, & Selwyn, 2018; van Duijin, Swanick, & Donald, 2014; Metzler, Sanders, Rusby, & Crowley, 2012; Stoetzel & Shedrow,

2020). Such programmes have been found to lead to enhanced learning outcomes (van Duijin, Swanick, & Donald, 2014). However, the evaluation of such programmes is still in its infancy.

Evaluations have largely focused on participants' satisfaction with the programmes and their content knowledge. In this regard, three studies stand out in demonstrating the range of evaluation possibilities: Cardwell and Elliott (2018); Daugherty, DePadilla and Sarmiento (2019); and Driska (2018).

Cardwell and Elliott (2018) investigated youth sport coaches' perspectives of an asthma education module by using focus groups, held at least three months post-course (to afford the coaches time to apply their knowledge in practice), to find out learners' experiences of the course. In particular, Cardwell and Elliott (2018) were interested in the learners' knowledge and attitudes toward the module, air quality, respiratory health, and sport. In an effort to understand the information from the module that was recalled (if any), and how it may have impacted upon attitudes towards asthma or encouraged specific behaviours related to asthma in sport, learners were provided with asthma in sport scenarios that described module content and were asked to discuss asthma and athlete management in these scenarios (Cardwell & Elliott, 2018). The learners' experiences were explored to better understand their perceptions of the implementation of the module, barriers related to content application, and recommendations for the development of the module (Cardwell & Elliott, 2018). Coaches perceived the module to be relevant, but the content was considered to be less valuable in certain contexts (e.g., indoor environments) or when compared with other coach education (Cardwell & Elliot, 2018).

Daugherty, DePadilla and Sarmiento (2019) measured the effectiveness of an online course aimed at increasing coaches' knowledge of concussion by utilising pre- and post-course questionnaires. To determine whether HEADS UP coaches' training improves knowledge, attitudes and behavioural intentions, learners were given a pre-test comprised of 13 knowledge questions and seven behavioural intention and attitude questions. Following the completion of the online course, learners were given a post-test comprised of the same questions. Learners demonstrated improvement in five of the seven concussion- related attitude and behavioural intention items post-training, indicating the online course had achieved some of its aims.

Driska's (2018) evaluation of USA Swimming's nationwide online coach education programme involved a utilisation-focused approach which involved one-to-one interviews with programme decision-makers and learners. The evaluation was undertaken in four phases: (1) programme description: initial information gathering and determination of key programme decision-makers; (2) programme elicitation: to determine the theory-in-use from programme staff (via interviews and focus groups); (3) programme effectiveness: interviews with learners; (4) reporting findings and facilitating their use by key decision-makers. The findings revealed that the course was delivered effectively, perceived positively by coaches, but had varying effects on knowledge, attitudes, and subsequent behaviours (Driska, 2018).

Blended learning

Blended learning – a combination of online and in-person education – has been increasing in popularity (Sharma, 2010). Viewed as enhanced student learning and providing rewarding teaching experiences for facilitators, blended learning, if structured appropriately, merges the

strengths of online and in-person teaching (Schindel, Hughes & Sadowski, 2013). Furthermore, scholars have identified that educators and learners believe that blended learning opportunities can enhance learning experiences (Cooper & Higgens, 2015; Wilson & Greig, 2017). There has been limited discussion of the use of blended learning in coach education, however, work by Crotty, D'Arcy and Sweeney (2016) has focused on the development of a blended coach education programme for the Gaelic Athletic Association (GAA). In this work, two e-learning professionals were tasked with the development of online resources that would aid in developing the knowledge and skills of GAA coaches across Ireland and supplement the traditional field-based model of coach education. Central to the development of the online resources were concerns that the materials have a solid pedagogical underpinning (Crotty et al., 2016). As such, the blended model needed to support the development of (physical and virtual) communities of practice and allow for mentorship programmes between coaches of varying levels of experience and differing qualifications (Crotty et al., 2016).

The coach education courses were offered at the Foundation, Award 1 and Award 2 levels. At the Foundation level, the coordinators had the option of running the traditional in-person course over two days, or a blended approach comprising of four hours of interactive online theory-based work and a separate four-hour practical session. Crotty et al. (2016) noted that the blended course was met with a positive response, yet not all regions had adopted it. One possibility for this lack of uptake could be in the increased workload (to be discussed in the following paragraph).

Blended learning has been praised for its flexibility, the ability to review and repeat information, increased participation, and participant preparedness which increased class time to apply the online content (Bergviken Rensfeldt et al., 2018; van Duijin et al., 2014; Volansky, 2019). However, there are limitations. Aside from the possible technological issues that may hinder the learning opportunity, one of the main drawbacks that has been identified is the increase in workload when combining two approaches (Adams, 2013; Green & Whitburn, 2016). In contrast to in-person delivery, an online environment requires a different pedagogical approach that enables the learner to engage with the educator, other learners, and the course content (Volansky, 2019). These lead to an increase in the time (and resources) needed to develop and facilitate a blended learning programme (Volansky, 2019).

Summary

The growth of online education and/or development programmes might reflect to learners that they are meaningful and beneficial. There is potential for online learning to be more learner-centred (adopting a constructivist approach to learning) through the use of reflective learning activities; content that addresses relevant, real-world coaching issues; content that is connected to coaches' experiences; and content that promotes discussions between learners/facilitator (Driska, 2018). This is possible as demonstrated by Stoetzel and Shedrow (2020), whose evaluation of an online instructional coaching programme revealed that the social approach to learning and the [role]-embedded nature of coursework were instrumental in grounding inquiry in authentic real-world problems that enabled participants to map learning to their specific contexts. From this, it appears that some forms of online and inperson professional development can provide for comparable learning (Fishman et al., 2013). However, whether learning is online or blended, to create meaningful programmes more theoretical guidance and evidence-based recommendations are needed. In addition, there

have been calls for investigations to focus on educator perspectives on how specific technologies within online communities can foster engagement and learning outcomes (Lantz-Andersson et al., 2018; Yurkofsky, Blum-Smith & Brennan, 2019).

The Effectiveness of Virtual Learning Environments (VLEs)

Introduction

The rapid advancement of information and communication technology has had a significant impact on education, teaching and training (Karunaratne & Byungura, 2017). Traditional face-to-face learning is no longer the exclusive method of delivering education (Chowdhry, Sieler & Alwis, 2014) as more establishments are offering online courses either as part of a blended learning approach, distance learning, or fully online (Sharma & Garg, 2016). Virtual learning environments (VLEs) support the delivery of online education offering flexible, self-directed, autonomous learning (Chou & Lui, 2005; Dale & Lane, 2007; Sharma & Garg, 2016). Although online education has a strong research base (Hodges et al., 2020), evaluations on the effectiveness of VLEs remain limited (Chowdhry et al., 2014; Alexander et al., 2019). Here we provide a brief introduction to VLEs. Strengths and limitations of VLEs are then described as reported in the literature, and key findings taken from evaluations on the effectiveness of VLEs are critically discussed.

Virtual Learning Environments (VLEs)

Over the past two decades, use of virtual learning environments (VLEs) as a platform to support and deliver online learning has grown (Gordon, 2014; Xu et al., 2014), particularly within the contexts of computer education (Piccoli, Ahmed & Ives, 2001; Chou & Lui, 2005; Wu, Tennyson & Hsia 2010; Stricker, Weibel & Wissmath, 2011) and higher education (Swan, 2001; Demian & Morrice, 2012; Chowdhry et al., 2014; Alexander et al., 2019). VLEs have become more sophisticated (Clarke, 2013) and are well-established in many educational institutions (JISC, 2009). VLEs are most commonly used as part of blended learning delivery to supplement face-to-face learning and thus enhance the student learning experience (Chowdhry, Sieler & Alwis, 2014). However, they are further used to support online distance learning (Demian & Morrice, 2012) and more recently, due to Covid-19, to carry out emergency remote teaching (Hodges et al., 2020). Popular institutional VLEs include Blackboard, Moodle, and Sakai (Gordon, 2014). Furthermore, personal virtual learning environments (PVLEs) are becoming more prevalent as they offer learners greater flexibility and control over their learning environment (Xu et al., 2014). In comparison to VLEs, which typically provide all learners with a single set of learning materials, PVLEs cater to individual learning styles, offering personalised learning materials, tests and instant interactions (Xu et al., 2014).

The literature on VLEs highlights inconsistencies in the use of terminology when describing different learning environments (Moore, Dickson-Deane & Galyen, 2011) and types of delivery modes (Sharma & Garg, 2016). Terms including 'online learning', 'e-learning', 'distance learning' and 'web-based learning' are used interchangeably with 'virtual learning environments', 'learning management systems', 'course management systems' and 'technology enhanced learning' (Rovai & Barnum, 2003; Moore, Dickson-Deane & Galyen, 2011; Sharma & Garg, 2016; Alexander et al., 2019). According to both Moore, Dickson-Deane and Galyen (2011) and Sharma and Garg (2016), variation in use of terminology and

lack of meaningful definitions lead to confusion and inconsistent research findings on the effectiveness of VLEs. This is discussed further in section three of this report. However, for the purpose of this literature review, VLEs are defined as "computer-based environments that enable teachers to upload learning material, customise the content and how it's delivered, and allow students to interact with each other and access a wide variety of resources offering flexibility and autonomy for learning" (Wilson, 1996; Piccoli et al., 2001; Flavin, 2016, cited in Alexander et al., 2019: 2). The next section of this report considers the strengths and limitations of VLEs.

Strengths

VLEs can be accessed by learners at any time and in any place, which creates greater flexibility, accessibility and convenience in terms of pace, place and mode of learning (Arbaugh, 2000; Piccoli et al., 2001; Wu, Tennyson & Hsia, 2010; Clarke, 2013; Gordon, 2014; Sharma & Garg, 2016; Alexander et al., 2019). Common functions of a VLE include supporting communication via email, synchronous chat tools, and asynchronous discussion forums (Clarke, 2013). Both Piccoli et al. (2001) and Chou and Lui (2005) suggest that asynchronous learning - 'learning anywhere, anytime' - supports learners to retain control and choice of when and how they choose to engage in the learning experience. Communication is enhanced through the use of asynchronous learning as learners are given the opportunity to engage in reflective and thoughtful discussions (Arbaugh, 2000; Liburd & Christensen, 2013). A study carried out by Pavey and Garland (2004), which evaluated the effectiveness of 'e-tivities' delivered through a VLE, found that asynchronous and synchronous discussions were viewed positively by some students who were more able to communicate their ideas through the discussion forums as compared to in a classroom environment where they felt intimidated. However, in a different study, McGugan and Peacock (2002) reported that openness in communication and lack of anonymity resulted in non-engagement with discussion forums amongst students.

Unlike face-to-face teaching which is predominantly teacher-directed (Wu, Tennyson & Hsia, 2010), online learning through the provision of VLEs supports independent, autonomous learning (Dale & Lane, 2007) by shifting control and responsibility to learners (Chou & Lui, 2005; Sharma & Garg, 2016). According to Liburd and Christensen (2013) there is an epistemological shift away from knowledge transfer from teacher to student and towards a shared construction of knowledge with co-creation at its heart. Responsibility for learning sits with the student and the student community, and through interaction, communication and discussion active learning and critical thinking are more likely to transpire (Piccoli, Ahmed & Ives, 2001; Pavey & Garland, 2004). Additionally, VLEs can cater to all learning styles if resources provided are eclectic and easily accessible (Demian & Morrice, 2012). There is also the ability to deliver courses to a larger group of learners and ensure a consistent learning experience for both learners and tutors (JISC, 2009).

Limitations

Difficulties in using technology and lack of basic IT skills amongst students and tutors were commonly reported within the literature as limitations of using VLEs (McGugan & Peacock, 2002; Haven & Botterill, 2003; Liburd & Christensen, 2013; Chowdhry et al., 2014; Alexander et al., 2019). Compatibility issues when using mobile phones and Apple products to access VLEs were described by Alexander et al. (2019). Meanwhile, Liburd and Christensen (2013) commented on difficulties students encountered in terms of navigating their way around the VLE and its range of resources. They recommend that students need to be given time and

support to familiarise themselves with the VLE and careful consideration should be given to the organisation of learning activities within the VLE (Liburd & Christensen, 2013). McGugan and Peacock (2002) further found that learners who were not as confident with technology and who lacked basic IT skills required hands- on instructional support from tutors.

However, both Haven and Botterill (2003) and Chowdhry et al. (2014) suggest that tutors themselves found VLEs difficult to use and lacked the skills needed to deliver online learning through the VLE, due to limited IT skills and lack of staff training on VLEs. The time and resources required by staff to develop and deliver online courses through the VLE can further impact on its uptake (Arbaugh, 2000).

Despite the flexibility of learning offered through VLEs, which is viewed by many authors as advantageous (Arbaugh, 2000; Piccoli, Ahmed & Ives, 2001; Wu, Tennyson & Hsia, 2010; Clarke, 2013; Gordon, 2014; Sharma & Garg, 2016; Alexander et al., 2019), the flexibility of VLEs also causes some limitations (Gordon, 2014). Gordon (2014) suggests that too much flexibility can create confusion for learners who may struggle to decide what, where and how they learn. Additionally, the vast range of resources on offer can lead to information overload (Gordon, 2014; Sharma and Garg, 2016). This was evidenced in a study undertaken by McGugan and Peacock (2002) who reported that learners struggled to cope with the extensive electronic information made available to them on the VLE. They further highlighted difficulties learners encountered in terms of accessing and storing information and how they evaluated and applied information to different contexts (McGugan & Peacock, 2002). Feelings of isolation, frustration and anxiety experienced by learners engaging in online learning are also reported as common limitations within the VLE literature (Piccoli, Ahmed & Ives, 2001; Wu, Tennyson & Hsia, 2010; Sharma & Garg, 2016).

Evaluations on the Effectiveness of Virtual Learning Environments (VLEs)

While use of VLEs has become more prevalent within education establishments, there remains limited research on their overall effectiveness in contrast to traditional classroom-based teaching and learning (Piccoli et al., 2001; Chowdhry et al., 2014; Alexander et al., 2019). VLE research has mainly focused on stakeholder perceptions and implementation as a means to develop appropriate evaluation methods, particularly in the context of blended learning (Chowdhry et al., 2014).

The impact of VLEs on learning is still poorly understood (Laurillard, 2008 cited in Alexander et al., 2019). Evaluations that have been undertaken have been criticised for inconsistencies in use of technological terminology (Moore, Dickson-Deane & Galyen, 2011; Sharma & Garg, 2016) and heterogeneity of outcome measures and study designs, making it difficult to determine best practice (Karunaratne & Byungura, 2017; Alexander et al., 2019).

The VLE literature highlights a number of different outcome measures that have been used to evaluate the effectiveness of VLEs on learning. However, this report focuses on the outcomes most commonly reported, which include: academic performance, satisfaction, self-efficacy, and knowledge acquisition. The next section of this report discusses some of the key findings taken from evaluations of VLEs.

One of the most cited evaluations that attempted to measure the effectiveness of VLEs in the context of basic IT skills training was a study undertaken by Piccoli et al. (2001). This study compared a web-based VLE to a traditional classroom-based course measuring

effectiveness through performance, computer self-efficacy, and satisfaction outcomes (Piccoli et al., 2001). Using previous research in technology-mediated education, Piccoli et al. (2001) developed a conceptual framework for the determinants of learning effectiveness in VLEs. According to the authors' model, there are two important dimensions at play: the *human dimension* and the *design dimension* (Piccoli et al., 2001). Important antecedents within the *human* dimension include the maturity and motivation of learners, positive attitudes, previous experiences with using technology, computer anxiety and instructor teaching style, self-efficacy, and availability. Within the *design* dimension, the learning model, technology, learner control, content, and interaction are highlighted as significant precursors for VLE effectiveness (Piccoli et al., 2001). A number of hypothesis were developed and tested based on the conceptual framework. Findings from this study suggested that there were no significant differences in performance between VLE students and classroom-based students. However, students who used the VLE reported higher computer self-efficacy and lower levels of satisfaction with the learning process as compared to students receiving classroom-based learning (Piccoli et al., 2001).

Further studies undertaken by Stricker, Weibel and Wissmath (2011) and Chowdhry, Sieler and Alwis (2014) support the above findings on performance. Stricker et al. (2011) compared VLE users with non-users measuring performance using students' final exam grade. They found that students who used the VLE did not perform any better in the final exam compared to those who did not use the VLE (Stricker et al., 2011). However, their findings suggested that there was a relationship between the amount of time spent using the VLE and performance (Stricker et al., 2011). Students defined as 'heavy' VLE users performed better than non-users in the final exam (Stricker et al., 2011).

Similarly, Chowdhry et al. (2014) investigated the relationship between VLE usage and academic performance using the final marks obtained by students as a measure. They found that VLE usage itself did not have a direct impact on academic performance, however, use of online discussion forums encouraged interaction and active learning, resulting in some correlation with the final marks (Chowdhry et al., 2014). Only two studies, undertaken by Xu, Huang, Wang and Heales (2014) and Alexander, Barcellona, McLachlan and Sackley (2019), found an improvement in academic performance for students who used VLEs. However, only Alexander et al. (2019) reported this improvement to be statistically significant.

Evaluations that have used *learner satisfaction* as an outcome measure for VLE effectiveness have similarly reported mixed findings. Xu et al. (2014) found no significant difference in satisfaction between experimental (VLE users) and control (non-users) groups. Meanwhile, Alexander et al. (2019) suggested that there were some positive aspects of specific technology-enhanced resources that contributed to student satisfaction. However, a lack of consistency in the quality of resources and a lack of clarity when using forums negatively impacted on overall satisfaction (Alexander et al., 2019). System design and flexibility, interaction, and learning climate were commonly reported as having a positive impact on learner satisfaction (Arbaugh, 2000; Swan, 2001; Rovai & Barnum, 2003; Wu, Tennyson & Hsia, 2010). Arbaugh (2000) used a questionnaire design to examine students' perceptions of usefulness and ease of use of VLEs, with satisfaction as the primary outcome. Findings from this study suggested that programme flexibility and VLEs that allowed for greater student interaction influenced learner satisfaction more than the ease or frequency of VLE usage (Arbaugh, 2000). This finding is supported by Swan (2001), Rovai and Barnum (2003) and

Wu, Tennyson & Hsia (2010), who all further highlight the importance of VLE design and interaction to learner satisfaction. Swan (2001) suggests that clarity of design, interaction with instructors, and active discussion between learners significantly influence learner satisfaction and perceived learning. Additionally, Wu et al. (2010) found that interaction had a significant effect on learning climate, whereas Rovai and Barnum (2003) suggested student interaction facilitated through synchronous and asynchronous forums increases learning outcomes.

As discussed above, performance and satisfaction were reported as the most common outcome measures for studies evaluating the effectiveness of VLEs on learning. However, self-efficacy and knowledge acquisition also featured in the VLE literature (Piccoli, Ahmed & Ives, 2001; Chou & Lui, 2005; Xu et al., 2014; Alexander et al., 2019). Studies undertaken by Piccoli et al. (2001), Chou and Lui (2005) and Xu et al. (2014) similarly used computer self-efficacy as a measure for VLE learning effectiveness. These studies reported higher computer self-efficacy for students using VLEs as compared to students undertaking traditional classroom-based courses (Piccoli et al., 2001; Chou & Lui, 2005; Xu et al., 2014; Alexander et al., 2019). Alexander et al. (2019) alternatively examined whether technology-enhanced resources improved students' knowledge acquisition. Findings from questionnaire responses and focus groups suggested that students found technology-enhanced resources helped them to build knowledge and understanding of the subject matter and prepare them for final exams (Alexander et al., 2019).

Summary

This brief review of the literature on the effectiveness of VLEs has highlighted important findings in relation to both human and design factors that impact on learning outcomes such as performance, satisfaction, self-efficacy, and knowledge acquisition. Tools that facilitate synchronous and asynchronous discussions are critical in supporting learner interaction. There is some evidence to suggest that interaction through VLEs can increase academic performance and learner satisfaction (Arbaugh, 2000; Swan, 2001; Rovai & Barnum, 2003; Wu, Tennyson & Hsia, 2010; Chowdhry et al. 2014). VLE systems that are flexible, have relevant content, and are reliable further improve learning outcomes (Arbaugh, 2000; Piccoli et al., 2001). However, inconsistencies in technological terminology and different study designs and outcome measures contribute to conflicting findings about VLE effectiveness (Moore, Dickson-Deane & Galyen, 2011; Sharma & Garg, 2016; Karunaratne & Byungura, 2017; Alexander et al., 2019). Therefore, more research on the impact of VLEs on learning is needed, particularly in contexts other than higher education.