

An investigation into teacher's perceptions and implementation of fitness testing within secondary schools.

A thesis submitted to the University of Wales Trinity Saint David in candidature for BA Physical Education.

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Abstract

Intro: Fitness testing is a method of assessment used within PE lessons at secondary schools throughout the UK. The rationale for this research project was to explore the perspectives of teachers' implementation of fitness testing in a secondary school environment. Using the work of Rowland (1995) to determine if teachers are still using fitness testing as a means of assessment and teaching, or if the subject has progressed and implemented new innovative methods. **Method:** Participants for the study were solely secondary school PE teachers. This research study intended to collect data that was suitable for a mixed-method approach which involved the creation of a questionnaire. The questionnaire created had a mixture of open and closed questions, for the open-ended questions to collect teachers' opinions on fitness testing, published on Facebook. This process allowed for a deeper perception to be analysed from collected data. The questionnaire received a total of 16 responses, 8 males and 8 females. Through thematic analysis, all of the open-ended questions have emerged into themes of teachers' perceptions, implementation of fitness testing and perceptions of barriers and strengths. **Discussion:** It was found that teachers are still using fitness testing as a method of assessment and learning, this was a dominant aspect throughout the results. A main finding was that most respondents believed that fitness testing should be included within the curriculum, as it can provide benefits such as the understanding of fitness components. However, some respondents stated that they believe there is no necessary need for the implementation of fitness testing. **Conclusion:** Overall, from this research study, it could be found that fitness testing is still a dominant factor in PE throughout secondary school. In the case of future research, a different perspective such as the students would be undertaken, to gather evidence to determine if they believe there are benefits of fitness testing being taught.

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1.0 Introduction

The purpose of this research project is to investigate teachers' perceptions and experiences of fitness testing within a secondary school environment. Physical Education (PE) is a subject that intends to shape future generations into becoming physically educated, with the ideology being that they would intend to lead a healthy active lifestyle throughout their lives (Blair and Guildea, 2019). However, PE has been a subject of significant debate due to rising concerns related to physical inactivity in young people and the ongoing epidemic of childhood obesity (Dehghan, Akhtar-Danesh, and Merchant, 2005; Harris, 2016; Wrench and Garrett, 2008). One specific area of contention is the role of fitness testing in PE. Therefore, this has led to the consideration that fitness testing within an educational program and environment has positives and negatives to being taught to secondary school students. The consideration of implementing fitness testing in school has led to the debate of whether fitness testing is a suitable method of measuring students' health and fitness. Silverman, Keating, and Phillips, (2008) use this debate to provide several futures for fitness testing, with the consideration that fitness testing should become a part of the curriculum allowing for the topic to have standardised testing to allow for the creation of physical development programs to be taught to adolescent's during and outside of school (Silverman, Keating, and Phillips, 2008). On the contrary, there are beliefs that the use of fitness testing is an approach that should be carefully reconsidered due to the negativity that is being found by children participating in these lessons largely associated with a lack of motivation to take part (Cale and Harris, 2009).

Furthermore, considering the rising epidemic of childhood obesity it has been considered by Cohen, Voss, and Sandercock (2015), that fitness testing is an approach that should be considered to lower the statistics of children being labelled under the category of obese. Following on from the research of Cohen, Voss, and Sandercock (2015) the concept of fitness testing being used for an educational purpose is considered unproblematic and the reasoning for its lack of success is due to the teacher's inability to move away from traditional assessment methods such as fitness testing. Therefore, it is required that teachers should begin to change their perceptions of fitness testing by providing adequate knowledge to change what Cohen, Voss, and Sandercock (2015) describe fitness testing to be the 'horse' into a method that can cater to teachers and students. Alfrey and Gard (2019) suggest that if teachers were to be efficiently trained and given the essential knowledge to create a model of fitness testing that moves beyond traditional practice to a more contemporary, motivational, and engaging experience for young people.

Taken together, there continues to be significant debate surrounding the role of fitness testing in PE. However importantly, there is limited knowledge surrounding the current practices used in schools including the perception and experiences of existing teachers in implementing fitness testing in schools. Indeed, Mercier, Phillips, and Silverman, (2016) outline that many researchers are unaware of how fitness testing is currently being implemented into lessons, meaning further, more

contemporary research is needed. To that end, this research project intends to investigate teachers reasoning as to why fitness testing is implemented specifically in their schools. In addition, the research gathered from the participant's perceptions will lead to the outcome of whether teachers believe fitness testing has a beneficial purpose to being taught, rather than it being considered as a traditionally rooted teaching practice.

1.1 Aims

This research project aims to investigate the perceptions and experiences that have led to current teachers implementing fitness testing into their lessons yearly within a secondary school environment. Continuing to investigate if the teachers' beliefs and attitudes towards fitness testing are a relevant and beneficial approach to the fight against childhood obesity through public health. These investigations will be done to determine if teachers are up to date with the benefits of fitness testing or if the practices are conducted due to the fear of moving away from traditional PE.

1.2 Objectives

- To gain a full understanding of fitness testing in schools by undertaking extensive credible research within the published literature focused on fitness testing.
- To identify and fully understand teacher perceptions of fitness testing within the UK allowing for an investigation to be made on teachers' philosophy on their use of fitness testing, including the interests to why they include/exclude fitness testing.
- To establish if there are gaps in knowledge, which could require teachers to undergo further education on the curricula and uses of fitness testing in schools.

1.3 Hypothesis

This research project will have two variations of hypotheses, the null hypothesis predicts that UK teachers will be unaware of the benefits of fitness testing as well as the reasons why they implement fitness testing into their criteria. The alternative hypothesis predicts that a high percentage of teachers will only use fitness testing in their lessons due to previous experiences from their school experience, rather than personal knowledge of the topic.

2.0 Literature Review

2.1 Role of PE

There has been an ongoing debate as to whether PE as a school subject is a beneficial contributor that works towards the learning planned within the curriculum (Penney and Chandler, 2000). The Association of Physical Education (AfPE) define PE as planned, progressive learning that is designed to take place in a school curriculum and is available to all students involving the teaching of 'learning to move' and 'moving to learn' (AfPE, 2019).

Winsley (2003) outlines that the national curriculum for PE specifically in England has an identified commitment to ensure students have the knowledge and an understanding of health and fitness. Furthermore, It can be identified in the previous curriculum for Wales that PE during Key stages 3 and 4 of health and fitness would be monitored and influence students to begin taking responsibility for their well-being (Welsh government, 2008) Suggesting similarly to the work of Winsley (2013) that it is part of the curriculum that PE has a role to teach students the knowledge and understanding, to enable them the opportunity to take responsibility of their own fitness and health (Welsh government, 2008).

This view justifies how PE is a subject that deserves to be within the curriculum, due to the depleting levels of physical activity that have been recorded (Hills, Andersen, and Byrne, 2011; Kirk, 2006). Fairclough and Stratton, (2005) as well as Wallhead and Buckworth (2004) suggest that the use of PE advocates as a method of structured physical activity in which students will be required to take part regularly each week. In addition, Fairclough, and Stratton, (2005) support the subject as being a leading contributor towards children's health and fitness, due to the subject's ability to provide children with their daily goal of physical activity. Lang *et al.* (2023) discuss how fitness testing has adapted across decades from being rudimentarily focused on performance-related fitness, to now focus on health-related fitness testing. However, despite the contribution PE is making towards children's health and fitness the rise in childhood obesity is a rising epidemic, which seems to be passing the responsibility on to PE to resolve (Hills, Andersen, and Byrne, 2011; Lang *et al.* 2023). Cale, and Harris (2013) believe that PE can indeed work towards the promotion of a healthier nation by tackling the obesity crisis. However, Cale and Harris (2013) discuss the discourse that is surrounding the topic of obesity and believe that the attempts being made are due to policies and media leading to a misguided attempt to solve this issue. As a result of this, the work of Wiersma and Sherman (2008) suggests that the use of fitness testing can be a useful tool used appropriately, which suggests development could be one aspect of a curriculum for PE. Moreover, Lang *et al.* (2023) research suggest that interventions such as community-based, family and home should be investigated and could complement the promotion of increased physical fitness of children and adolescents.

Wiersma and Sherman (2008) believe that educators are unwilling to use fitness testing as an integral part of the curriculum and due to this, these educators are misguiding students which are leading to these negative reactions towards fitness testing. In this case, it has been suggested that physical educators are failing to engage all children in physical activity and in doing so they are failing to achieve their curriculum aims due to the inability to change their teaching strategies (Cale and Harris, 2013; Locke, 1992). As a result of this evidence, it can be seen through the work of Kirk (2006) and Trout and Graber (2009) that the use of fitness

testing as a method of measuring physical activity levels was unsuccessful due to students' fear of performing in front of peers due to their results. Therefore, it should be considered that the use of fitness testing is a traditional method of PE which is still used throughout secondary schools (Lloyd, Colley, and Tremblay, 2010). However, Lloyd, Colley, and Tremblay, (2010) believe that the focus should be on increasing the physical activity that children are doing within PE lessons as well as outside of school rather than focusing on the fitness and the results they achieve from testing.

2.2 Fitness testing in schools

It has been outlined that PE is designed for students to participate in physical activity, for students to develop an understanding of how they can remain physically active for life. Due to PE being a subject within the school curriculum, it has been argued that there is a need for a method to be enforced in which PE can be assessed which has led to the central theme of fitness testing (Baghurst and Mwavita, 2014). Fitness testing has become a traditional and integrated practice of the PE experience, in which this method of testing aims to evaluate students' health status and fitness progress (Wrench and Garrett, 2008). However, Wrench and Garrett (2008), as well as Cale and Harris (2009), argue the idea of fitness testing as a method of assessment in PE is contributing to the diminishing interest in the subject. The research conducted by Cale and Harris (2009) suggests that the PE approach to fitness testing is a misdirected effort to promote a healthy active lifestyle. Resulting in the suggestion that PE should consider moving away from fitness testing and introducing new methods of learning to provide a more meaningful future for the subject (Cale and Harris, 2009; Kirk, 2009).

Based on the ideas of Rowland (1995) the use of fitness testing is a process which is accepted and, in some cases, a mandatory requirement by schools that all students will have to perform each test. However, Rowland (1995) suggests that fitness testing contains plenty of flaws with the first flaw highlighting the link that performance fitness provides health outcomes is weak, and fitness testing should be considered as a link towards physical activity. This leads to the argument that fitness testing is an anti-ethical method, regarding its design which is to promote physical activity, which has caused students to feel embarrassed and uncomfortable whilst participating in these style of lessons (Cale and Harris, 2009; Rowland, 1995; Wrench and Garrett, 2008). Building upon the work of Rowland (1995), Corbin *et al.* (1995) notes that fitness testing could survive and remain a part of PE providing that the subject can promote the Health, Everyone, Lifetime and Personal (HELP) philosophy. Therefore, if educators were able to transform physical fitness testing into a method of teaching using the HELP philosophy, PE would be working towards making students feel good as well as motivated compared to feeling bad about themselves (Corbin

et al. 1995; Cale and Harris, 2009). However, Corbin *et al.* (1995) question whether fitness testing the problem is or rather the way it is taught within schools. This leads to Corbin *et al.* (1995) research regarding different methods of testing such as self-testing, institutional testing, and elite performance testing. Corbin *et al.* (1995) discuss how the use of institutional testing which requires students to provide consent and the fitness tests that are performed will not lead to students feeling embarrassed. The institutional testing method aims to encourage learning around concepts such as health, fitness, and activity to create this new strategy of testing to contribute to students living an active lifestyle (Corbin *et al.* 1995). Overall Corbin *et al.* (1995) believed in a similar approach that Rowland (1995) endorsed with the idea of fitness testing as being a 'horse that has been overridden' and the need for a new strategy to promote lifetime activity for students is needed.

As a result of this, Cale, Harris, and Chen (2007), as well as Liu, (2008) continued the research more than 10 years after the work of Corbin *et al.* (1995) and Rowland (1995) revisiting the debate to whether fitness testing can provide meaningful promotion to physical activity. From the research gathered by Cale, Harris, and Chen (2007) the concerns expressed through the work of Rowland (1995) about fitness testing, appear to be a concerning reality with fitness testing appearing to have made a common occurrence within the PE curriculum. Therefore, Cale, Harris, and Chen (2007) used their research to revisit the debate and monitor the progress that has or has not been made regarding fitness testing during curriculum time. It was found that fitness testing in schools had grown in popularity due to the rising concerns over adolescents' physical fitness as well as physical activity levels. However, these concerns are ill-founded and there is little evidence that can suggest that the more active a child is equated to how high their level of fitness will be (Cale, Harris, and Chen, 2007; Rowland, 1995; Liu, 2008). Cale, Harris, and Chen (2007) revisit the work of Rowland (1995) which suggests there is still weak evidence that physical fitness during adolescence relates to health in adulthood. Regarding the work of Rowland (1995), Cale, Harris, and Chen (2007) argue that schools need to begin focusing on the process of physical activity and the promotion of living an active lifestyle rather than on the product of fitness. Overall, Cale, Harris, and Chen (2007) believe that it is time that educators dismount the fitness testing horse accepting that there is a need for change.

2.3 Does fitness testing need to change?

Although, there is scarce evidence which indicates that the need for new fresh guidance is required for the future of testing (Cale, Harris, and Chen, 2007). Cale, Harris, and Chen (2007) believe that this process is unlikely to be available at this moment in time, therefore they advise that current and future educators should consider stepping away from fitness testing to remove the dominance it currently holds within schools' efforts to promote physical

activity. As a result of Cale, Harris, and Chen's (2007) debate, the advancement of this ongoing argument was further researched by Lloyd, Colley, and Tremblay (2010) discussing that assessment should be a part of PE, as it is deemed as important as others subject such as maths and English. However, Lloyd, Colley, and Tremblay (2010) make it clear that they do not support fitness testing as being the method of robust assessment. Suggesting, it is indeed time to vacate from the use of fitness testing, referring to this transition as 'riding a different animal' such as the zebra in replacement to that of the horse (Lloyd, Colley, and Tremblay, 2010). The assessment model of the zebra as Lloyd, Colley, and Tremblay (2010) label it is to illustrates how the method of fitness testing is only a small segment of what needs to be taught as well as assessed within PE. This leads to their perception of physical literacy to which Whitehead (2013) states that physical literacy's role is the motivation, physical competence as well as knowledge and understanding that allows individuals to take value and responsibility in engaging in physical activity for life. This indicates Lloyd, Colley, and Tremblay (2010) perception of the zebra assessment model leaning towards a specific focus on physical literacy with a similar viewpoint to that of Whitehead (2013) which all researchers believe the focus should be encouraging lifelong physical activity. Continuing, Lloyd, Colley, and Tremblay (2010) believe that considering teaching pedagogy of mounting the zebra could lead to the incorporation of physical literacy, therefore leading to the introduction of the four core domains which they believe if physical educators were able to implement into the successful lessons a child would be physically literate and develop a base level of competency in each of these domains. However, as has been studied by the likes of Cale, Harris, and Chen (2007) and Lloyd, Colley, and Tremblay (2010) schools are still currently addressing the crisis of lower physical activity levels by addressing the PE curriculum with fitness testing. This has ultimately led to the decision by Lloyd, Colley, and Tremblay (2010) that the zebra should be the new motion for physical educators to begin implementing into their lessons. Especially, when considering the complications that are arising from the obesity crisis and inactivity which is being strongly provoked by the modern lifestyles that children are living it is clear to see that PE robust assessment should be considered just as important as the likes of maths and English (Lloyd, Colley, and Tremblay, 2010; Hills, Andersen and Byrne, 2011).

Following on to the final piece of research on the topic of fitness testing led to the work of Cohen, Voss and Sandercock, (2015) who express their greatest concerns for children's fitness levels 5 years on from the work of Lloyd, Colley, and Tremblay, (2010) to which warned of the rising levels of inactivity and obesity levels. Cohen, Voss and Sandercock, (2015) discuss how the use of the zebra approach would aid the step back that is needed from fitness testing but ultimately would not solve the problem of inactivity. Instead, their research suggests that the zebra should be mounted and begin to be worked into the PE

curriculum, but for changes to be successful educators should be collaborating with health professionals and academics from a sports and psychology background to inherit a multidisciplinary approach (Cohen, Voss and Sandercock, 2015). For this process to be successful it would require all organisations to remain updated with modern literature as well up to date with regular training to understand how assessing has changed as well new innovative approaches to health and fitness practices. Cohen, Voss and Sandercock, (2015) finalise their research by summarising their belief that further acknowledges the research that has been carried out over the last 20 years that it is time to step away from fitness testing being the sole assessment of PE and it is time for fresh skilled teachers to take their place as educators and influence the change from the horse (fitness testing) to the zebra (physical literacy) (Cohen, Voss and Sandercock, 2015).

Therefore, in summary, the use of fitness testing in schools remains a highly contested area of concern. Its role in supporting prominent aims in PE remains questionable. However, importantly, little is known about the current use of fitness testing in schools and indeed whether the ongoing debate in the academic literature is perceived by PE teachers in the field. As such, this study aims to explore teacher perceptions and current experiences of using fitness testing in schools.

3.0 Methodology

To explore the research aim, a mixed-method survey was used. This enabled a wider range of data to be collected, allowing for graphs and tables to be made, meaning that data could be formatted into a visible graph showing the percentage of different ages. As well as providing the opportunity to analyse respondents' perceptions of the topic allowing for a more critical approach to be taken when comparing results to the literature researched.

3.1 Research Philosophy

From the collected qualitative data an interpretive approach will be taken when analysing the findings, this is due to the data being associated with teachers' personal opinions on their perceptions behind the implementation of fitness testing (Putnam and Banghart, 2017). Whilst the quantitative data collected will follow a positivist approach as it will be able to show any correlations from the credible and reliable primary data of this research study (Ryan, 2006).

3.2 Sampling

The chosen sampling method was snowball sampling, this was due to the convenience this specific method provided regarding the method chosen for data collection which was the questionnaire. Due to the central theme of this research project revolving around secondary

school teachers' perceptions, it was important for the success of this research to access a range of qualitative data (Naderifar, Goli and Ghaljaie, 2017). The main use of snowball sampling is to target specific groups of people in this case secondary school teachers, this population of participants are hard-to-reach which is why snowball sampling is a convenient method of use (Naderifar, Goli and Ghaljaie, 2017; Parker, Scott, and Geddes, 2019). Snowball sampling requires trust upon the respondents to further share and promote the questionnaire to whom it may be relevant in this case to other faculty members at their school (Naderifar, Goli and Ghaljaie, 2017; Parker, Scott, and Geddes, 2019). When utilised snowball sampling can be a convenient method for questionnaires with few disadvantages. Parker, Scott and Geddes, (2019) as well as Biernacki, and Waldorf (1981) highlight that the main disadvantage to this method of sampling is the initial beginning of the data collection which they established if the questionnaire failed due to a lack of willing participants. However, Parker, Scott, and Geddes (2019) go on to discuss how the use of the snowball method can lead to respondents taking part and producing biased results, due to being in contact with others that share similar interests in the topic of discussion. The purpose of this study would deem as a positive aspect of the study, due to the requirement of respondents to have perceptions around the theme of implementing fitness testing into secondary school lessons (Parker, Scott, and Geddes, 2019).

3.3 Primary data

A questionnaire was the chosen method for data collection of teachers' perceptions of the implementation of fitness testing in secondary schools. The reasoning behind this chosen method of data collection was due to the research conducted by Chaleunvong (2009) who identified that questionnaires are often used for quantitative studies but when the question is adapted it can be used for mixed method studies. Chaleunvong (2009) and Patten (2016) both discuss how the use of questionnaires can be a beneficial data collection tool due to the large quantities of data that can be gathered from their use in a short period which was necessary for this specific study. As a result of this research project focusing on how secondary school teachers may implement fitness testing into their lessons, the questionnaire needed to be anonymous allowing for the respondents to provide honest answers to each question, therefore, ensuring the validity of the results (Yang, Zhong and Wright, 2005; Patten, 2016; Simmons, 2001). Due to this focusing on teachers and the responses given could cause an effect on their careers the anonymity was a vital focal point which is why this questionnaire followed the general data protection regulation (GDPR) to protect all participants involved (Regulation, 2018). Before the participants were able to answer the questions provided, a debrief of the project's aims and objectives as well as further information such as contact details were provided to ensure that all participants who wished to take part were agreeing that their responses could be used for this project. An

email address was attached within this debrief in the case of further enquiries participants would be able to contact to discuss such enquiries or concerns regarding the research project.

The choice to use a questionnaire as the appropriate tool for data collection was beneficial due to the minimal cost involved in creating and sharing a questionnaire combined with the lack of funding (Patten, 2016; Yu and Yu, 2007). The creation of questionnaire was developed using Microsoft Forms due to its easy-to-use platform, it also allowed the researcher to observe the interactivity of the questionnaire providing further insight to determine when data collection should be stopped (Dewaele, 2018). Due to Microsoft Forms being a software that is provided by the university, there were no costs associated with the creation of the questionnaire this was beneficial for the research study due to the lack of funding (Patten, 2016). Furthermore, the use of the questionnaire on computer software allowed for the questionnaire to be broadly distributed using emails as well as free social media platforms; therefore, there were no costs involved with the process of designing and distributing the questionnaire. However, Patten (2016) and Jones *et al.* (2008) state that there are disadvantages to using questionnaires, for instance in the case that a lack of participants involved in the questionnaire it could lead to an effect on the validity of the results. Therefore, for this study snowball sampling will be used to overcome this disadvantage, using sharing the questionnaire across online platforms. Additionally, it has been suggested by Patten (2016) and Yu and Yu (2007) that the use of questionnaires as a form of data collection particularly qualitative data can be limited and therefore interviews would be suggested as a more appropriate approach. However, due to the mixed method approach of quantitative and qualitative data being collected using open-ended questions for qualitative it will reduce the limitations.

The questionnaire design consisted of 5 close-ended questions, to gather an understanding of the teachers' experience with fitness testing as well as to understand if they implement this style of teaching into their lessons. There were 11 open-ended questions included in the questionnaire, to gather more information on the teachers' perceptions of implementing fitness testing into their lessons. The implementation close-ended questions were used in the questionnaire due to the advantage of gathering quick data such as gender, and participation in fitness testing (Reja *et al.* 2003). However, Reja *et al.* (2003) suggest that although close-ended questions will encourage respondents to remain engaged in the questionnaire it can also lead to invalid data due to respondents choosing answers by random to finish sooner. As a result, of this concern, the questionnaire was designed to ensure that respondents knew it was a voluntary research study with a detailed explanation of what the research study will consist of ensuring that participants are aware ion the aims

and are happy to remain a part of the study. Overall, the questionnaire consisted mainly of open-ended questions, Reja *et al.* (2003) discuss how the use of open-ended questions is advantageous especially when attempting to collect data that is opinionated on a specific topic. Therefore, these questions were designed in a way to avoid any influence from the researcher and allow respondents to give detailed responses of their own opinions and feelings from the questions (Reja *et al.* 2003).

Before the final questionnaire was published a pilot questionnaire was shared to 2-3 participants to ensure that the design of the questionnaire was appropriate and did not mislead or influence any participants in their responses. Van Teijlingen and Hundley (2002) discuss the importance of running a pilot study as well as how the use of a pilot can increase the likelihood of success in the main study. A pilot study can address issues that could lead the main study to fail or lead to validity issues within the data collection, in the case of this study it would highlight any concerns concerning the wording and order of the questions (Burgess, 2001; Van Teijlingen and Hundley, 2002). The pilot questionnaire can be seen in Appendix A, as expressed by Van Teijlingen and Hundley, (2002) the wording of questions could lead to influential responses, therefore, corrupting the data collection, this is why the pilot questionnaire was reviewed by the researcher and respondents were allowed to contact the researcher and express any concerns that may have been raised. Once the results from the pilot questionnaire had been reviewed the final version was distributed across emails as well as social media platforms, specifically Facebook. The reason Facebook was the chosen platform to share the questionnaire was due to the popularity of this platform held but also due to the platform's ability to create groups which were for specific audiences (Escobar-Rodríguez, Carvajal-Trujillo, and Monge-Lozano, 2014). The questionnaire will be active for three weeks to allow for the flexibility of teachers' busy schedules with the opportunity to extend the scheduled date by a week if further results are needed.

3.4 Secondary data

A detailed literature review was compiled to obtain better knowledge as well as a collective understanding of fitness testing whilst also learning more about fitness testing in a secondary school environment (Hart, 2018). Therefore, it was important to perform a literature review which was detailed but also remained accurate to the topic of the research project (Boote and Beile, 2005; Clark, 2013; Hart, 2018). As a result of this, it allowed for the literature review to create a foundation for the research project to gain generativity as the project progresses (Boote and Beile, 2005; Clark, 2013). Through the extensive research conducted to form the literature review the data collected was able to aid the creation of the questionnaire allowing for the questions created to remain accurate to the overall question of the research project (Boote and Beile, 2005; Clark, 2013; Hart, 2018). As a result of the advances made in

technology as well as the field of a topic, a range of credible sources were implemented throughout the process of completing the literature review (Knopf, 2006). The credible sources used were academic journals and books which were accessed using the University library to gain further understanding of fitness, testing and school curriculums as well as relevant data which has been published.

3.5 Data Analysis

The data collected from the questionnaire will be separated into quantitative data, qualitative data, and raw data. The raw data will be categorised into positive, neutral, and negative data to begin familiarising with the data to allow for an easier transition with later data analysis. The quantitative data will then go through a descriptive analysis to allow for visible data to be seen. The qualitative data will undertake the process of reflexive thematic analysis by following the method of Braun and Clarke (2012).

3.5.1 Quantitative Data

The quantitative data will begin by being designed into charts and graphs to easily display the raw data and this will be found in Appendix D of the thesis. The reason behind this will be to easily recognise the statistical data such as the amount of female or male teachers that have participated (Loeb *et al.* 2017). These graphs will be a part of the Microsoft Forms software which has been used for the questionnaire so responses will be analysed immediately into graphs and charts. Moving on the quantitative data from these graphs will be used to design a set of tables which will represent the close-question responses through the process of frequency analysis. This will allow for data to be presented through the total frequency and percentage scores when appropriate. Moreover, the data will then be analysed into descriptive data of total participants, as well as, independently for males and females involved (Loeb *et al.* 2017). During this process of analysing the data, the mean and standard deviation will be calculated to present the characteristics of the data collected (Lee, In and Lee, 2015). Lee, In and Lee, (2015) discuss the use of standard deviation to indicate how accurately the mean data reflects the sample data.

3.5.2 Qualitative Data

After the process of data collection is completed, the qualitative data will undertake the process shown by Braun and Clarke (2012) of reflexive thematic analysis, to identify patterns of common themes across the data set. The use of Thematic Analysis (TA) can provide a flexible approach to the analysis of qualitative data (Braun and Clarke, 2012; Clarke, Braun, and Hayfield, 2015). The process of this data analysis will see the use of Braun and Clarke (2012) 6-step guide being followed. This

will require “step 1: familiarise with data, step 2: code the data, step 3: Search for themes, Step 4: Review themes, Step 5: Define themes and Step 6: Write up”. Therefore, the use of TA will allow for codes to highlight interesting features of the data which are relevant to the research question and to be designed as the building blocks of themes (Braun and Clarke, 2012; Clarke, Braun, and Hayfield, 2015). This will lead to the themes identified to create a framework for organising the observations of the data and to begin comparing and discussing how the data may differ from previous credible research (Braun and Clarke, 2012; Clarke, Braun, and Hayfield, 2015). Once the themes have been established, a table will be designed to include the main themes of the analysis, alongside example quotes from the responses provided by participants. This will lead to the data being discussed further in the thesis to compare themes of the data and literature from various other researchers.

3.6 Ethical considerations

An ethics form (Appendix B) was submitted and approved by the University of Wales Trinity Saint David before the conduction of research to avoid any ethical misconception that could cause harm to the participants of the research project (Greaney *et al.* 2012). The ethics form was designed to cover risk assessments, data protection, and data ownership as well as, provide a brief overview of the research project for participants to understand what the project entails (Greaney *et al.* 2012; Brooks, Te Riele, and Maguire, 2014). Also, informing each participant that they have the right to withdraw from this research study (Brooks, Te Riele, and Maguire, 2014). As a result of this, the questionnaire was designed in a way to eliminate any negative impacts to be brought upon participants, whilst also allowing for the responses to be honest to the views of the participants (Greaney *et al.* 2012; Marshall, 2005). The tone, as well as the language of the questions, were designed to avoid negative impacts on responders but also to allow for non-bias data to be collected from the participants involved (Marshall, 2005; Parfitt, 2013). Throughout this research study, the ethical guidelines followed will also look to the British Educational Research Association (BERA) as further guidelines on how to commence research safely and professionally (Brooks, Te Riele, and Maguire, 2014).

4.0 Results

In Appendix D the raw data collected from the open-ended questions of the questionnaire can be found categorised into positive, negative, and neutral responses alongside pie charts for the close-ended questions. This has inspired the creation of the tables presented in this section of the thesis, to show the analysis of the qualitative data which has used Braun and Clarke, (2012) theory of TA to highlight themes within the data. From the research 16 PE teachers (n= 8 females, n= 8 males) took part in the process of completing the questionnaire (Appendix C) which was shared, allowing

for the data collection to be completed (Table 4.1) It could be identified that the average age of all teachers was 36.5 years (SD=9.00). On average, respondents had been in the industry of teaching for 12.65 years (SD=8.32).

Table 4.1: Quantitative data around Teachers' experiences and age.

Table 4.1 shows the mean average of the teacher's age, years of teaching experience and what they ranked the importance of implementing fitness testing from 1-5. The table also represents the standard deviation of the data collected.

Items	Total			Males			Females		
	M	SD		M	SD		M	SD	
Age	36.5	9.00		37.75	8.94		35.25	9.49	
Years teaching	12.65	8.32		13.87	8.08		11.37	8.91	
Importance of implementing fitness testing (1-5)	2.8	0.96		3.42	1.03		2.75	0.78	

Table 4.2: Teachers' perception of taking part in fitness testing as well as implementing.

Table 4.2 illustrates the percentage of teachers that took part in fitness testing during their school years, as well as the teachers who still implement fitness testing into their lessons.

Items	Total			Males			Females		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Did you take part in fitness testing during school?	13 (81%)	2 (13%)	1 (6%)	6 (37.5%)	1 (6.25%)	1 (6.25%)	7 (43.75%)	1 (6.25%)	0 (0%)
Do you implement fitness testing into your lessons?	14 (88%)	2 (12%)	0 (0%)	7 (43.75%)	1 (6.25%)	0 (0%)	7 (43.75%)	1 (6.25%)	0 (0%)

Table 4.3: Thematic analysis of the open-ended questions.

Table 4.3 represents the qualitative data collected from the questionnaire after it has gone through the process of reflexive thematic analysis. The table shows the main themes that have been addressed from the data as well as example quotes from the respondents.

Themes	Coded phrases	Example quotes
Implementation of Fitness testing (Red)	Health x19 Obesity x5 Maintain/improve/record Activity levels x5 Fitness x19	"To promote lifelong physical activity participation and to educate pupils on their bodies and how nutrition and physical activity can help to have a healthy lifestyle"- Respondent 2
Perception of Strengths (Green)	Fun and enjoyable x3 Knowledge and understanding developed x3 Areas of strength and areas of improvement x4 Developing understanding x7	"It helps pupils set individual targets and assess their strengths and areas for improvement."-Respondent 5
Perception of barriers (Purple)	Compare to norm data x4 Pressure x4 Selection process x3 Disappointed, embarrassed and anxious x11	" testing could embarrass and ridicule children if results are shared or their performance is considered poor compared to norms"- Respondent 1
Perception of Teachers(Blue)	Educational purposes x9 Yes to being taught x10 No to being taught x8 Need to make to fun and enjoyable x4	"Physical Education is about learning through physical activity and therefore bespoke fitness testing sessions have no place on the curriculum."-Respondent 16

4.1 Quantitative Results

Overall, quantitative findings generally demonstrated that most teachers at 88% (Table 4.2) still implement fitness testing into their lessons. The findings from the questionnaire showed teachers' perceptions on how important they felt the implementation of fitness testing was with a bar chart being visible in Appendix D, it could be seen that the average score was 2.8 (SD=0.96). Closed questions were analysed using frequency analysis which can be seen presented in Table 4.2 as total frequency and percentage scores. This allowed for descriptive data to be calculated for all respondents and it can be seen from Table 4.1 that this was done independently for both Male and Female teachers. The reason for descriptive analysis was to allow for basic characteristics of the data set to be discussed such as the age of participants. As previously mentioned, the raw data was organised into positive and negative data, from the responses to the questionnaire it was identified that across all questions a total of 67 responses were positive and a total of 43 responses were categorised as negative around the topic of fitness testing.

4.2 Qualitative Results

The 16 teachers who took part in the questionnaire generated a total word count of 2653, which allowed for this data to be analysed. In line with the work of Braun and Clarke (2012), qualitative data was analysed via reflexive thematic analysis. This analysis generated four themes that related to teachers' perceptions and their perceptions of implementing fitness testing into lessons (Table 5.3)

Firstly, a clear theme was established which related to the **implementation of fitness testing** it was apparent that teachers still use fitness testing and believe that the use of fitness testing can work towards improving health, fitness, and the obesity epidemic. For example, respondent 2 commented how fitness testing aims “to promote lifelong physical activity participation and to educate pupils on their bodies and how nutrition and physical activity can help to have a healthy lifestyle”. This was further supported by respondent 13 who commented “for pupils to understand their fitness levels and their impact of their fitness on their health”. This theme suggests that respondents believe that fitness testing is a useful tool for promoting physical activity.

Secondly, the next theme which was presented related to the teacher's **perceptions of strengths** which can be provided by fitness testing. It was apparent from Appendix D that the raw data supplied indicates that teachers still believe fitness testing to be beneficial and had very positive perceptions of the topic. For example, respondent 5 responded that “It helps pupils set individual targets and assess their strengths and areas for improvement”. The response from respondent 5 was able to highlight the potential benefits of using fitness testing and what it can provide educationally to students when implemented correctly.

During this theme which represented the teachers' **perceptions of barriers**, it was identified that the views were more from the negative raw data (Appendix D). Respondent 1 response believed that “testing could embarrass and ridicule children if results are shared or their performance is considered poor compared to norms”. The response from respondent 5 can suggest that from their own experiences as a teacher, they have witnessed their students feeling embarrassed during the process of fitness testing. From Table 4.3 the words embarrassing and disappointed were associated with 11 responses. Moreover, with the 11 associated responses to the word embarrassing, it can be assumed that this is a regular occurrence within PE lessons when students are expected to partake in fitness testing.

Finally, the final theme focussed on the **perceptions of the teachers**, this theme varied in its responses from positive and negative, respondent 16 implied “Physical Education is about learning through physical activity and therefore bespoke fitness testing sessions have no

place on the curriculum”. It can be seen from the comment of respondent 16 that they believe fitness testing should not be used this was further supported by the response of respondent 14 which states “too much emphasis can be on fitness testing” and “often it can overshadow more important aspects such as skills and visions”. Therefore, it can be implied that fitness testing although provides some benefits can often cause more harm and prevent important skills from being taught.

5.0 Discussion

This study aimed to investigate teachers' perceptions of the implementation of fitness testing within secondary schools. The research found 87.5% (Table 4.2) of respondents have implemented fitness testing into their lessons, whilst 12.5% of respondents have chosen to leave fitness testing out of lessons. Although 12.5% of respondents had not used fitness testing in their lessons, all 16 respondents shared their perceptions of the use of fitness testing.

5.1 Implementation of fitness testing

From Table 4.2 it is evident that 81.3% of respondents took part in fitness testing during their time at school, whilst 12.5% did not take part whilst attending school. Therefore, this could lead to a relation in the results found in table 4.2, to why there is a potential that 87.5% of respondents have chosen to use fitness testing as a method of teaching. It is also evident from the ongoing debate started by Rowland (1995) that teachers are continuing to use fitness testing as a method of teaching and assessment despite that researchers believe it is an outdated attempt to attach PE. By following the research in this study and the results from table 4.2 it can further support the work of Rowland (1995) as well as Lloyd, Colley, and Tremblay (2010) who suggested that fitness testing is still being used within schools despite the concern of it being an outdated method. However, by looking at table 4.3 the theme of why teachers implemented fitness testing it could be seen that ‘health’ and ‘obesity’ were common codes that appeared. Moreover, from Appendix D the responses were categorised into positive, negative, and neutral responses, with the majority being positive. The common theme (table 4.3) that was presented from this question was that respondents believed it was a good opportunity to teach ‘health benefits’ and encourage ‘activity levels’. Similarly, Hills, Andersen and Byrne, (2011) and Kirk (2006) believe that for these reasons, fitness testing has been modified in recent years to advocate for improving students' activity levels, which is similar to the responses collected from respondents. However, when looking at the negative responses of the raw data (Appendix D), it can be identified that similar patterns to the work of Cale and Harris (2013) as well as Locke, (1992) suggesting that teachers are failing to ‘motivate students due to their failure to recognise their misdirect effort to incorporate fitness testing into lessons.

5.2 Teachers Perceptions

There were numerous questions which can be seen from Appendix C that required the respondents to indicate their perception of fitness testing, by highlighting the reasoning behind their implementation (table 4.3) or refusal to implement (table 3.4). A bar chart (Appendix D) was produced to identify participants' opinions on the importance of implementing fitness testing, it could be seen that 6 respondents believed it was an important category to include within the lesson. The themes from these positive responses were 'fitness testing can help students understand different fitness components and how to improve these components'. These themes contradict the research of Mercier, Phillips, and Silverman, (2016) who believe that teachers do not understand why implementation of fitness testing is used, given the respondents in this study stated they were aware of the potential benefits that can be provided when fitness testing is taught correctly (table 4.3). This indicates the work of Alfrey and Gard (2019) who suggested that teachers need additional training for essential knowledge to avoid the rooted practices of fitness testing. Moreover, it can be seen from respondent 16, that they implement a 'unit of teaching that is student student-led related fitness to understand methods of training and components of fitness' suggesting that the work of Alfrey and Gard (2019) has begun to be implemented with teachers using their knowledge to create methods of teaching. Using table 4.3 it can be identified that teachers' perceptions were that 8 times it was believed fitness testing did not belong within the curriculum, however, 10 times it was apparent that teachers agreed there was a use for fitness testing. Within these responses, it could be established that most of the respondents believed the that benefits of fitness testing were establishing students' 'strengths'. However, Cale and Harris (2009) and Kirk (2009) have discussed how the use of fitness testing is a misdirected approach, by focusing on students 'strengths' it is Following the concerns of Corbin *et al.* (1995) focusing on elite performance testing rather than health and fitness. Moreover, Kirk (2006) and Trout and Graber (2009) state how students are often scared to take part in these types of lessons, by considering table 4.3 the words embarrassment and disappointed were frequent in teachers' responses. Therefore, stating that it is still a regular occurrence that teachers are facing with students being afraid or too embarrassed to take part in lessons. Appendix D can share a lot of positives around important aspects to consider as well as advice for newly qualified teachers. Similar themes were found such as respondents 3,7,9 and 10 continuing to bring attention to the results of performers being an aspect that should not be focused on, highlighting that fitness testing aims to provide awareness of how to improve the areas rather than diminish the results. These themes (Appendix E) were also found in the advice given by respondents in suggesting that the work of Cale and Harris, (2009) can be seen from teachers' perspectives. The responses of making lessons 'fun' and 'meaningful' shows a correlation to that of Cale and Harris, (2009) who stated that students were not motivated due to this style of lesson.

On the contrary, although the findings suggest teachers' perceptions are positive and still suggest that fitness testing belongs within schools, it can be seen from the questionnaire results that there were neutral and negative responses. It can be seen from Figure 4.4 that 6 of 16 respondents believe that the obesity crisis is reflecting negatively on PE and fitness. Respondent 2 stated 'they feel strongly that it should be a whole school approach not just PE' this follows similarly to the work of Hills, Andersen, and Byrne, (2011) and Lang *et al.* (2023) who showed concerns about PE becoming the main influencer for solving the epidemic. It could then be seen from respondent 6 'that the amount of time for PE received a week is minimal'. However, respondent 6 stately questions the work of Wallhead and Buckworth (2004) who suggest that students will take part in weekly lessons, respondent 6 believes this will 'make a minimal impact' at best. Furthermore, Appendix D expresses negative responses with respondent 6 stating that 'research around fitness testing doesn't point anymore in it being good practice' suggesting that the work of Rowland (1995) has been a reflection in respondent 6 perspective of using this method. The numerous neutral answers mainly focused on the theme of 'progression' which has been discussed. However, respondent 16 believes 'there is no place for fitness testing', following the work of Cohen, Voss and Sandercock (2015) it could be identified that teachers feel similarly that it is time to provide new innovative models into practice. Moreover, table 4.3 shows some words associated with the benefits too fitness testing, and few negatives came from these results, however, response 4 discusses the use of results to help 'gifted and talented' and 'selection for teams. Additionally, this aligns with the work of Lang *et al.* (2023) in which friends and community-based sports can complicate the focus of health-related fitness. In this case, focusing on gifted students can cause further negative experiences from students who are not as athletic. Figure 4.13 had a vast agreement that fitness testing has numerous drawbacks, with the common theme being 'students made uncomfortable' and 'demotivating and humiliating'. These responses support the work of Kirk (2006) and Trout and Graber (2009) whose evidence declared that students would not participate in these lessons due to fear of being humiliated by their peers.

5.3 Limitations, Strengths, and Future Research.

There was an expectation to receive at least 15 responses within two weeks, however, the deadline had to be extended to a third week of which 16 respondents were in total. The demographics of respondents (Table 4.1) show that the responses were 50% Male and 50% Female, suggesting that the responses would show no bias. There was an expected bias to come from this research due to the work of Lundeberg (1997) who suggests how often there is bias within PE lessons between peers and teachers. Lundeberg, (1997) and Lentillon, Cogérino and Kaestner (2006) suggest that PE is a heavily male dominating industry which

is why there was expectance of a male bias to be a part of this research project, however from the collected results it can be suggested that a fair judgement will be made. Moreover, it can be seen from the results (table 4.1) that the average age of the participants involved was 36.5 years. Table 4.1 highlights the length to which the participants have been teaching, with the average being 12.65 years which could suggest that a bias may be taken on their approach to teaching due to the age and length of teaching.

The use of Braun and Clarke (2012) TA was a very successful approach to the data analysis and allowed for multiple themes (table 4.3) to be considered and compared to other published literature. However, there were limitations to this method, with one being the time consumption it took to organise and code data alone. In future, the consideration of recruiting another person to code and aid the development of themes could be used (Braun and Clarke, 2012). This would allow for another level of reflexivity to be introduced into the data analysis process (Braun and Clarkes, 2012).

This research project has provided insight into teachers' perceptions and their implementation of fitness testing and has displayed areas for future investigation. To gain further understanding of fitness testing, students' perception, new methods of teaching and various other research projects should be undertaken. To gain a more accurate and reliable percentage of teachers that use fitness testing, research should be undertaken within secondary schools across the UK. However, this may be difficult and extremely time-consuming due to the vast population of teachers. It would also be extremely important to gather research on the student's perception of fitness testing, to compare to other research that has been conducted to determine if there are concerns with the method of teaching. Finally, interviews with teachers could be undertaken, in this research study there was a 16th question asked which resulted in respondents providing extra details in the case of interviews being needed. However, in the case of future research on this topic, the email addresses left could be contacted for further in-depth details on experiences and their perspectives.

6.0 Conclusion

The aims and objectives of this research project have been met. It was found that over half of the respondents used fitness testing and believed it had benefits to being taught. Most respondents (88%) use fitness settings within their lessons, however, only 37.5% of respondents believed it was an important aspect to include. It is important, however, that students are taught the process of fitness testing and understand how fitness components implement into their daily physical activity as well as teachers consider new methods to teach these aspects (Silverman, Keating, and Phillips, 2008). A very small portion of respondents 12% stated that they did not implement fitness testing into their lessons, with a lot of these responses being due to teachers not agreeing with the method.

The curriculum should ensure that educators are well-trained and aware of the prevalent concerns around fitness testing and create innovative teaching methods that move away from traditional teaching. It can be established that teachers are continuing to use traditional fitness testing methods as opposed to introducing a new model to fitness (Cale, Harris, and Chen, 2007; Rowland, 1995).

Finally, to encourage change from the use of fitness testing, teachers should be provided with more information regarding the risks of implementing these tests into lessons on the student's mental and at times physical health. This information should be provided by qualified professionals within the educational industry. This information could be shared using the curriculum, or in some cases, social media in PE focuses on a group.

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Appendix A - Pilot Questionnaire

1. Why have you been asked to take part?

Teacher's perceptions behind the implementation of fitness testing in secondary schools:

My name is Jack Starkey and I am currently studying BA physical education at the University of Wales Trinity Saint David.

1. Why are we doing this research project and why have you been asked to take part?

If you are in the profession of a secondary school physical education teacher, I would be grateful for your participation in my research project that I am conducting as part of my final year at university. By participating in this questionnaire you will be helping provide information relating to the role fitness testing in schools.

2. Do I have to take part?

No, participation is entirely voluntary. If you do not wish to participate, then simply close the questionnaire.

3. What would taking part involve?

The questionnaire will be focussing on teachers specifically in a secondary school environment, in order to gain an understanding of teachers perceptions and experiences that have lead to the implementation of fitness testing.

4. Are there reasons why I should not take part?

There is no reason that we can think of as to why you should not participate in the research project. However if you do not wish to, please just close the survey.

5. Will taking part involve any discomfort or embarrassment?

We do not anticipate any discomfort or embarrassment from participating in the study. The survey will be completely anonymous and in the case of the research project leading to interviews they will be conducted in a friendly environment in order to keep participants comfortable.

6. Who will have access to the information that I provide?

The questionnaire is anonymous and all responses will be kept strictly between the researchers involved. The questionnaire is voluntary meaning if at any point you wish to withdraw you are entitled to do so at any stage.

7. What will happen to the data collected and results of the project?

The data will be stored in a data protected file which will only be accessed by myself or my supervisor. Throughout the project the data collected will be anonymous in order to protect your identity as we discuss your answers.

8. How can I stop taking part in the project after it has started?

You are entitled to stop taking part in the project at any point if you email myself or my supervisor we will be able to remove yourself from the project up to two weeks after completion.

9. What happens if there is a problem?

If you have any queries or require further information please contact me (Jack Starkey - 2000916@student.uwtsd.ac.uk) or my tutor Dylan Blain at d.blain@uwtsd.ac.uk

Starting the questionnaire will be taken as you providing your informed consent to participate in the study.

Thank you in advance for your time and participation in this research project.

1. What gender do you identify as? 

- ☐ Male
- ☐ Female
- ☐ Other
- ☐ Prefer not to say

2. What is your DOB? 

Enter your answer

3. How many years have you been teaching for? 

Enter your answer

4. What are your views on the role of PE in the battle against the current obesity crisis? 

Enter your answer

5. Did you take part in fitness testing during your time at school? 

- ☐ Yes
- ☐ No
- ☐ Other

6. Do you use fitness testing in your lessons? 

- ☐ Yes
- ☐ No

7. If yes what are the main reasons to why you implement fitness testing? 

Enter your answer

8. If no, what are the specific reasons to why you do not use fitness testing. 

Enter your answer

9. How often do you use fitness testing in your lessons? 

☐ Weekly

☐ Monthly

☐ Yearly

☐ Other

10. On this scale, how important do you feel the implementation of fitness testing is? 
1= Not very important 5= Very important

1 2 3 4 5

11. What do you consider the role of fitness testing in school to be? 

Enter your answer

12. Are there any benefits to fitness testing if you believe there is please explain your thoughts. 

Enter your answer

13. Are there any drawbacks to fitness testing please explain your thoughts. 

Enter your answer

14. In your view, what are the important aspects for teachers to consider if implementing fitness testing in schools? 

Enter your answer

15. What advice would you give to newly qualified teachers when considering the use of fitness testing in schools? 

Enter your answer

16. As part of this study we may be required to gather additional research this would be through the process of a short semi-structured interview with participants. If you are willing to be contacted about the potential of participating in an interview, please leave a contact email address below. 

Enter your answer

Submit

Appendix B- Approved ethics form

APPLICATION FOR ETHICAL APPROVAL

In order for research to result in benefit and minimise risk of harm, it must be conducted ethically. A researcher may not be covered by the University's insurance if ethical approval has not been obtained prior to commencement.

The University follows the OECD Frascati manual definition of **research activity**: "creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications". As such this covers activities undertaken by members of staff, postgraduate research students, and both taught postgraduate and undergraduate students working on dissertations/projects.

The individual undertaking the research activity is known as the "principal researcher".

Ethical approval is not required for routine audits, performance reviews, quality assurance studies, testing within normal educational requirements, and literary or artistic criticism.

SECTION A: About You (Principal Researcher)

1	Full Name:	Jack Starkey			
2	Tick all boxes which apply:	Member of staff:	☐	Honorary research fellow:	☐
3	Undergraduate Student	☒	Taught Postgraduate Student	☐	Postgraduate Research Student

4	Institute/Academic Discipline/Centre:	Institute of Management and health
5	Campus:	Carmarthen
6	E-mail address:	2000916@student.uwtsd.ac.uk
7	Contact Telephone Number:	07787424725
For students:		
8	Student Number:	2000916
9	Programme of Study:	Physical education
10	Director of Studies/Supervisor:	Dylan Blain

SECTION B: Approval for Research Activity

1	Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☒	NO	☐
					Date
2	If Yes, please indicate source of approval (and date where known):	Research Degrees Committee	☐		
3		Institute Research Committee	☐		
4		Other (write in)	☐		

SECTION C: Internal and External Ethical Guidance Materials

Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, and also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines.		
1	UWTSd Research Ethics & Integrity Code of Practice	☒
2	UWTSd Research Data Management Policy	☒
3	British Educational Research Association(BERA)	☒

SECTION D: External Collaborative Research Activity

1	Does the research activity involve collaborators outside of the University?	YES	☐	NO	☒
2	If Yes, please provide the name of the external organisation and name and contact details for the main contact person and confirmation this person has consented to their personal data being shared as part of this collaboration.				
3	Institution	N/A			
4	Contact person name	N/A			

5	Contact person e-mail address	N/A			
6	Has this individual consented to sharing their details on this form?	YES	☐	NO	☐
7	Are you in receipt of a KESS scholarship?	YES	☐	NO	☐
8	Is your research externally funded	YES	☐	NO	☐
9	Are you specifically employed to undertake this research in either a paid or voluntary capacity?	Voluntary	YES	☐	NO
10		Employed	YES	☐	NO
11	Is the research being undertaken within an existing UWTSD Athrofa Professional Learning Partnership (APLP)	If YES then the permission question below does not need to be answered.	YES	☐	NO
12	Permission to undertake the research has been provided by the partner organisation	(If YES attach copy) If NO the application cannot continue	YES	☐	NO

Where research activity is carried out in collaboration with an external organisation

13	Does this organisation have its own ethics approval system?	YES	☐	NO	☐
14	If Yes, please attach a copy of any final approval (or interim approval) from the organisation				

SECTION E: Details of Research Activity

1	Indicative title:	Teacher's perceptions behind the implementation of fitness testing in secondary schools.		
2	Proposed start date:	25/11/2022	Proposed end date:	05/05/2023
3	Introduction to the Research:			

4	Purpose of Research Activity The purpose of this research activity is to explore the reasonings behind why Physical educators include fitness testing with their lessons (unit of work). Therefore the purpose will be able to highlight why fitness testing is being included within school lessons as well as being able to show what benefits teachers believe fitness testing provides during school. This has already been a topic of discussion through APE documents which have questioned the use of fitness testing during school activities.
5	Research Question Do teachers include fitness testing in secondary schools due to beneficial practice, or due to their experiences in schools involving similar practices.
6	Aims of Research Activity The aims will be to investigate why teachers use fitness testing as a method of teaching during the school year. As well as to investigate whether teachers believe that the use of this teaching method is beneficial when relating it to the fight against childhood obesity.
7	Objectives of Research Activity The objectives of this investigation will be to review current published literature focussing on fitness testing in secondary schools. And to use this literature to understand why teachers use this method, for example is it motivating. Or it is due to the gap in recent knowledge that is the concern of fitness testing being used.
8	Proposed methods (maximum 600 words) Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed.
9	During this research activity there will be a mixed method approach used in order to gather a range of data that will allow for a range of evidence to be referred too. The first method will be the process of a survey/questionnaire which will have questions resulting in an explanation to be given to the participants answers to certain questions. This will lead to an interview if the survey/questionnaire fails to reach a set amount of participants. The survey/questionnaire will consist of open/closed ended questions in order to collect quantitative and qualitative data. The interview would be one to one to allow for answers of the questions to be specific to the participants own opinions, therefore avoiding the risk of bias. Before the research is carried out all methods will begin by gaining consent from each participant as well as informing participants that if they wish to withdraw they are able too at any point throughout the research project. The questionnaire/survey will be shared out via email, social media platforms. And the interviews if needed would be arranged through contact by participants that have informed the researcher (through the use of the questionnaire) they would take part in further research if necessary.

10	Location of research activity Identify all locations where research activity will take place.
11	Mutually convenient site. In the case of interviews a quiet vacant room.
12	Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural and/or legal sensitivities or vulnerabilities of participants.
13	N/A

14	Use of documentation not in the public domain: Are any documents NOT publicly available?	NO	☐ x
		YES	☐
15	If Yes, please provide details here of how you will gain access to specific documentation that is not in the public domain and that this is in accordance with prevailing data protection law of the country in question and England and Wales.		

SECTION F: Scope of Research Activity

1	Will the research activity include:	YES	NO
2	Use of a questionnaire or similar research instrument?	☐ x	☐
3	Use of interviews?	☐ x	☐
4	Use of diaries?	☐	☐ x
5	Participant observation with their knowledge?	☐	☐ x
6	Participant observation without their knowledge?	☐	☐ x
7	Use of video or audio recording?	☐	☐ x
8	Access to personal or confidential information without the participants' specific consent?	☐	☐ x

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9	Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	☐ x
10	Performance of any acts which may cause embarrassment or affect self-esteem?	☐	☐ x
11	Investigation of participants involved in illegal activities?	☐	☐ x
12	Use of procedures that involve deception?	☐	☐ x
13	Administration of any substance, agent or placebo?	☐	☐ x
14	Working with live vertebrate animals?	☐	☐ x
15	Other primary data collection methods, please explain in this box. For example, 'focus groups'. Please indicate the type of data collection method(s) in this box and tick the accompany box.		
16	Details of any other primary data collection method:	☐	☐ x

SECTION G: Intended Participants

1	Who are the intended participants:	YES	NO
2	Students or staff at the University?	☐ x	☐
3	Adults (over the age of 18 and competent to give consent)?	☐ x	☐
4	Vulnerable adults?	☐	☐ x
5	Children and Young People under the age of 18? (Consent from Parent, Carer or Guardian will be required)	☐	☐ x
6	Prisoners?	☐	☐ x
7	Young offenders?	☐	☐ x
8	Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	☐ x
9	People engaged in illegal activities?	☐	☐ x
10	Others (please identify specifically any group who may be unable to give consent) please indicate here and tick the appropriate box.	☐	☐ x
11	Other – please indicate here:		

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12	Participant numbers and source Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?	
13	How many participants are expected?	Minimum of 6, with the intent to have 10 or more.
14	Who will the participants be?	Secondary school Physical education teachers
15	How will you identify the participants?	The participants will be identified through the use of a survey/questionnaire. Which may lead to a follow up interview by those consenting to be contacted in the future during the research period.

16	Information for participants:	YES	NO	N/A
17	Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
18	Will you tell participants that their participation is voluntary?	☒	☐	☐
19	Will you obtain written consent for participation?	☒	☐	☐
20	Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☐	☐	☒
21	If the research is observational, will you ask participants for their consent to being observed?	☒	☐	☐
22	Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
23	With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☒	☐	☐
24	Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
25	Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
26	If NO to any of above questions, please give an explanation			
27				

28	Information for participants:	YES	NO	N/A
29	Will participants be paid?	☐	☒	☐
30	Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
31	Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
32	Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
33	If YES to any question, please provide full details			
34				

SECTION H: Anticipated Risks

1	Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them. If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.		
2	Full risk assessment completed and appended?	Yes ☐ X	No ☐
3	Risks to participants For example: emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information		
4	Risk to Participant: There are risks that the questions asked could hold personal data that could be leaked.	This risk will be mitigated by the use of Microsoft form which is a data protected software. All data will be stored on Microsoft forms to avoid any information being leaked. Participants will be anonymous and will not be asked to present a name. The information will be kept on microsoft forms.	
5	If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities.		
	N/A		
6	Risks to investigator For example: personal safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest		
	Risk to Investigator: There could be a risk of accusation during the questioning if a participant feels the investigator is being unfair with the questions asked.	How will you mitigate the Risk to Investigator: Efficiently go through each question before going through with the questionnaire or interview to prevent the possibility of accusations being made.	
7	University/institutional risks For example: adverse publicity, financial loss, data protection		
	Risk to University: If the questionnaire/interview was to have implications such as data leaks or accusations made.	How will you mitigate the Risk to University: By using a secure data protected programme (Microsoft forms) to avoid data being leaked. As well as to protect identities of those participating to avoid accusations being made against the university. My professionalism is important as I am carrying the universities name when gathering this data.	

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8	Disclosure and Barring Service			
9	If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A
10	Does your research require you to hold a current DBS Certificate?	☐	☒ X	☐

SECTION I: Feedback, Consent and Confidentiality

1	Feedback What de-briefing and feedback will be provided to participants, how will this be done and when?
	I will be able to provide an overview of the general findings from the study (once completed) , which participants will be able to contact myself in order to receive.
2	Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded in accordance with prevailing data protection legislation.
	Before the questionnaire begins, the first few questions will require participants to tick a box showing that they are consenting to take part in this research project. As well during this consensual question participants will be given an explanation of how the research activity will take place and the process of collecting data. The final questions will also ask for contact details but will explain that it is not compulsory to answer, but only needed if those wishing to be contacted for further questioning. Information sheet will be presented before the questions begin, going through what the research aims to cover and the types of questions being asked.
3	Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case.
	All participants taking part will not be required to give personal details such as names, location, age. This is due to the research focussing specifically on their opinions, as well as the risk will be avoided by not using the schools name, or teachers names.

SECTION J: Data Protection and Storage

In completing this section refer to the University's Research Data Management Policy and the extensive resources on the University's Research Data Management web pages (<http://uwtsd.ac.uk/library/research-data-management/>).

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1	Does the research activity involve personal data (as defined by the General Data Protection Regulation 2016 "GDPR" and the Data Protection Act 2018 "DPA")?	YES	NO
	<i>"Personal data" means any information relating to an identified or identifiable natural person ("data subject"). An identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.</i>	☐	☒
2	If YES, provide a description of the data and explain why this data needs to be collected:		
	(this box should expand as you type)		
3	Does it involve special category data (as defined by the GDPR)?	YES	NO
	<i>"Special category data" means sensitive personal data consisting of information as to the data subjects' – (a) racial or ethnic origin, (b) political opinions, (c) religious beliefs or other beliefs of a similar nature, (d) membership of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) physical or mental health or condition, (f) sexual life, (g) genetics, (h) biometric data (as used for ID purposes).</i>	☐	☒
4	If YES, provide a description of the special category data and explain why this data needs to be collected:		
	(this box should expand as you type)		

5	Will the research activity involve storing personal data and/or special category data on one of the following:	YES	NO
6	Manual files (i.e. in paper form)?	☐	☒
7	University computers?	☐	☒
8	Private company computers?	☐	☒
9	Home or other personal computers?	☒	☐
10	Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☒	☐
11	"Cloud" storage or websites?	☒	☐
12	Other – specify:	☐	☐

13	For all stored data, explain the measures in place to ensure the security of the data collected, data confidentiality, including details of password protection, encryption, anonymisation and pseudonymisation:		
	The use of Microsoft forms as it is a data protected software provided by the university to use. The laptop will remain password protected. (this box should expand as you type)		
14	All Data Storage		
15	Will the research activity involve any of the following activities:	YES	NO
16	Electronic transfer of data in any form?	☒	☐
17	Sharing of data with others at the University?	☒	☐
18	Sharing of data with other organisations?	☐	☒
19	Export of data outside the European Union or importing of data from outside the UK?	☐	☒
20	Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
21	Publication of data that might allow identification of individuals?	☐	☒
22	Use of data management system?	☐	☒
23	Data archiving?	☐	☒
24	If YES to any question, please provide full details, explaining how this will be conducted in accordance with the GDPR and DPA (and/or any international equivalent):		
	Will be sharing on university servers.		
25	List all who will have access to the data generated by the research activity:		
	Jack Starkey Dylan Blain		
26	List who will have control of, and act as custodian(s) for, data generated by the research activity:		
	Jack Starkey Dylan Blain		
27	Give details of data storage arrangements, including security measures in place to protect the data, where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.		
	The data will be stored in microsoft forms due to it being a data protected app, which the university have advised using for this particular research project due to the protection it has in place. The data will be stored from the collection until May when the project will be handed in for marking.		

28	Please indicate if your data will be stored in the UWTS Research Data Repository (see https://researchdata.uwtsd.ac.uk/). If so please explain. (Most relevant to academic staff)					
29	Confirm that you have read the UWTS guidance on data management (see https://www.uwtsd.ac.uk/library/research-data-management/)	<table border="1"> <tr> <td>YES</td> <td>☒</td> </tr> <tr> <td>NO</td> <td>☐</td> </tr> </table>	YES	☒	NO	☐
YES	☒					
NO	☐					
30	Confirm that you are aware that you need to keep all data until after your research has completed or the end of your funding	<table border="1"> <tr> <td>YES</td> <td>☒</td> </tr> <tr> <td>NO</td> <td>☐</td> </tr> </table>	YES	☒	NO	☐
YES	☒					
NO	☐					

SECTION K: Declaration

31	The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants. In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice which is published on the website: https://www.uwtsd.ac.uk/research/research-ethics/
Signature of applicant:	J.Starkey
Date:	30/12/2022

For STUDENT Submissions:

32	Director of Studies/Supervisor:		Date:
33	Signature:		

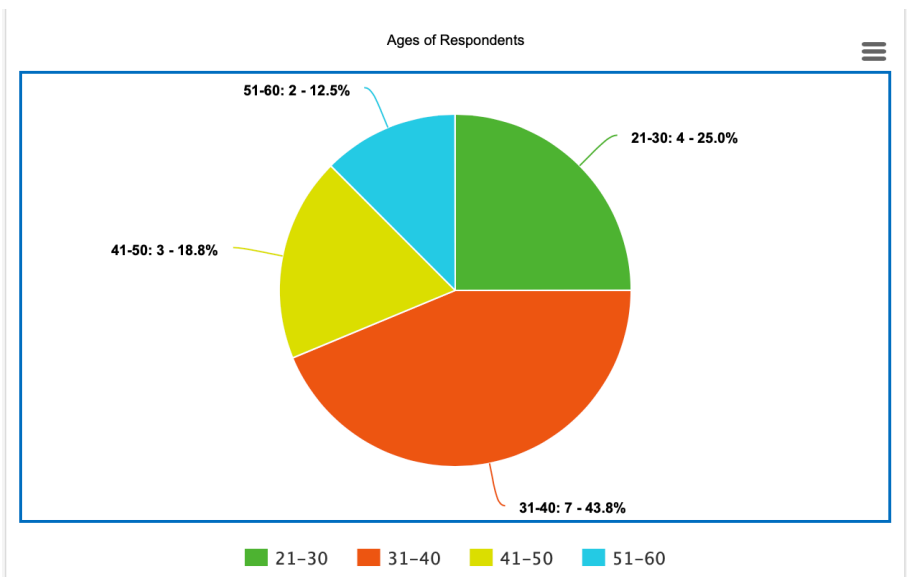
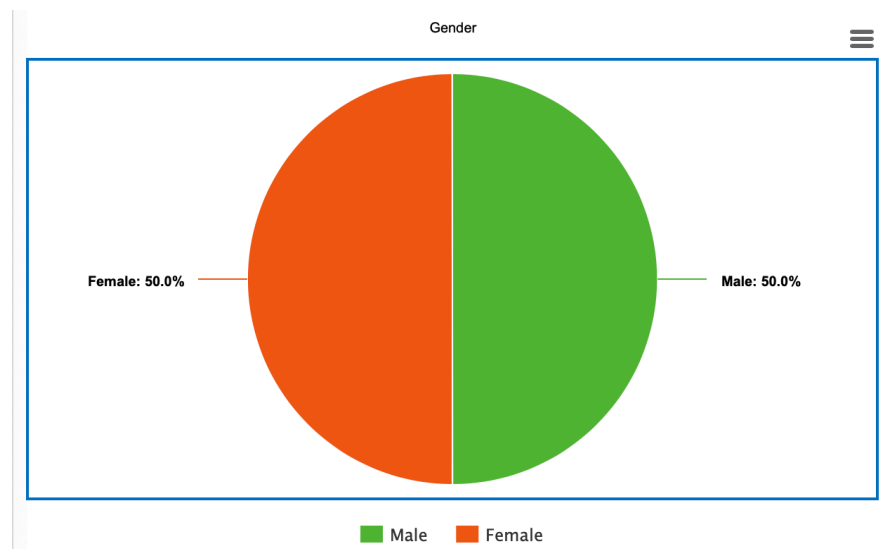
For STAFF Submissions:

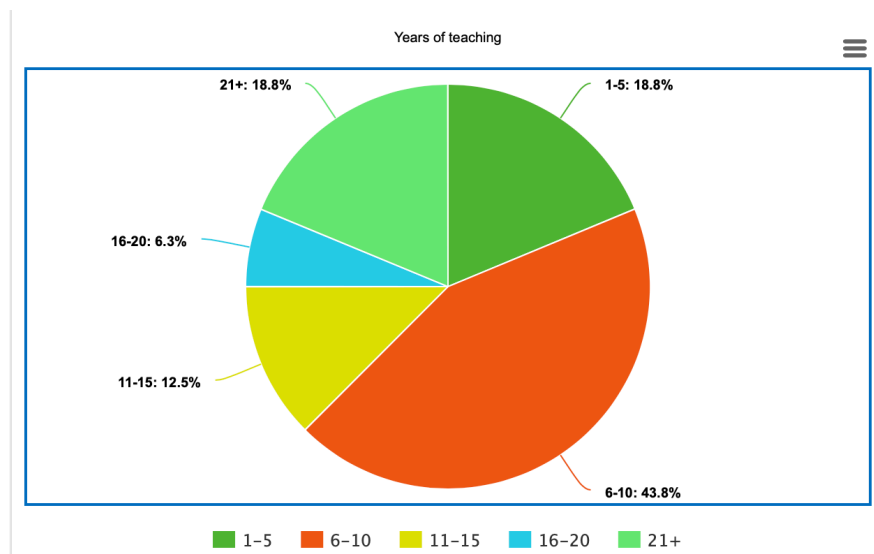
34	Academic Director/ Assistant Dean:		Date:
35	Signature:		

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☐	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (and have NOT completed Section H of this form) (where appropriate) ONLY TICK IF YOU HAVE ATTACHED A FULL RISK ASSESSMENT
☒	I understand that it is my responsibility to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice.

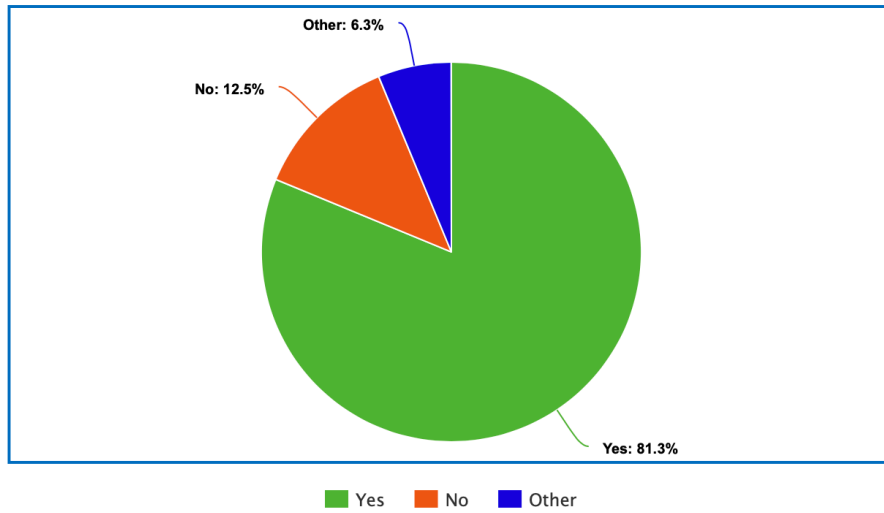
Appendix D - Examples of the Raw data collected



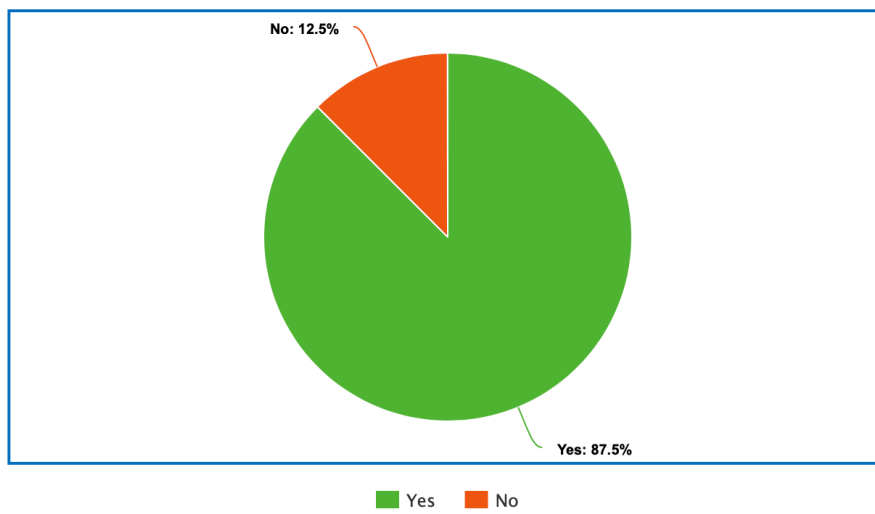


Respondents:	Positive	Negative	Neutral
Respondent 1	PE definitely plays a role. Children in the UK all are able to access PE in some form therefore, PE should offer important healthy active lifestyle information that may support lowering the levels of obesity.	N/A	N/A
Respondent 2	I believe that the governments are targeting PE as a subject within the curriculum and physical educators policy actors who can help to eradicate the obesity crisis and aid the view on public health	I feel strongly that it should be a whole school approach and not just PE's responsibility to do this.	N/A
Respondent 3	N/A	It's very challenging to hit the situation head on with extra pressures on mental health and fat shaming issues.	N/A
Respondent 4	Facilitates exercise in young peoples. Promotes a healthy active lifestyle. Helps aid students in maintain activity levels after they have left education.	N/A	N/A
Respondent 5	PE as part of a wider health and well-being role is key.	N/A	N/A
Respondent 6	N/A	The amount of time some pupils will receive per week will make a minimal impact at best	however, the challenge is clearly multi-faceted and not laid solely on PE in school.
Respondent 7	PE is extremely important to set the foundation for physical activity for life. It is also an opportunity to educate about the health benefits of physical education.	N/A	N/A
Respondent 8	Very important- but I think it is important to educate students to find types of exercise/sports they enjoy doing to ensure they participate outside of school and into the future.	N/A	N/A
Respondent 9	I feel it is vital. Students need to be active and be taught the importance of exercise in relation to health.	N/A	N/A
Respondent 10	N/A	Doesn't make a difference.	Year 11 & 12 health might as it teaches nutrition.
Respondent 11	It's about feeling good about yourself.	N/A	Our emphasis is teaching and educating children that being physically fit is important.
Respondent 12	I believe PE plays a pivotal role on the curriculum.	Due to the range of subjects taught in secondary PE is often overlooked as a core subject.	N/A
Respondent 13	N/A	Children's fitness levels are declining and attitudes towards fitness are definitely changing. Pupils are less motivated to push themselves and work hard on their fitness	N/A
Respondent 14	I think PE is crucial as children spend more time on the computers at home now. PE is the only time some pupils will have an opportunity to keep fit and healthy.	N/A	N/A
Respondent 15	N/A	N/A	It's complex, PE does have a role in educating children about their bodies
Respondent 16	N/A	N/A	While I believe PE plays a significant role in the health and well-being of young people, the current curriculum allowance of 2 hours per week is not sufficient to completely tackle obesity.

Did you take part in fitness testing

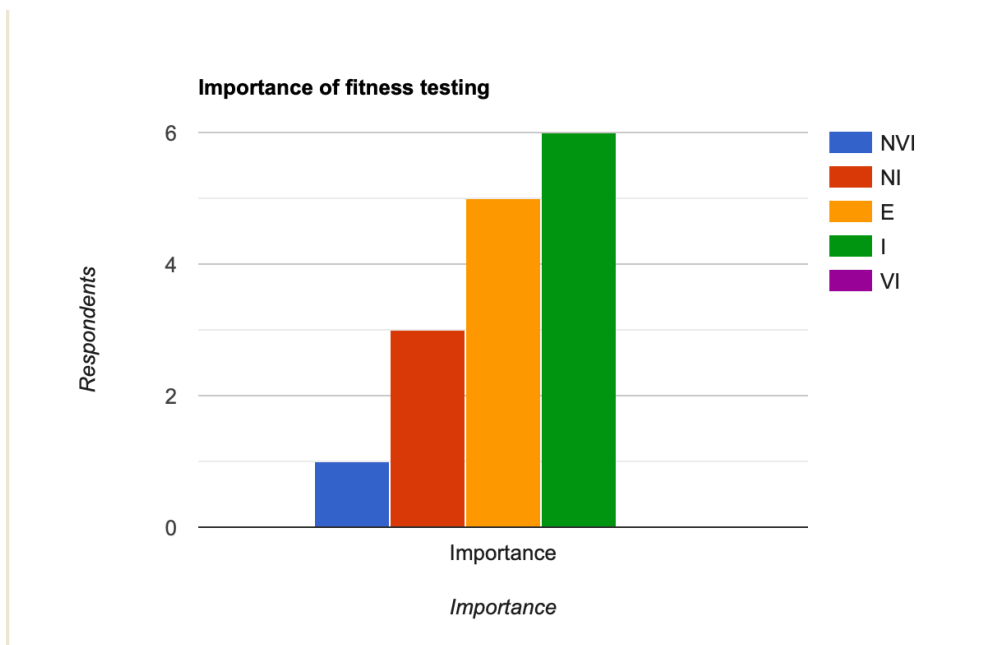
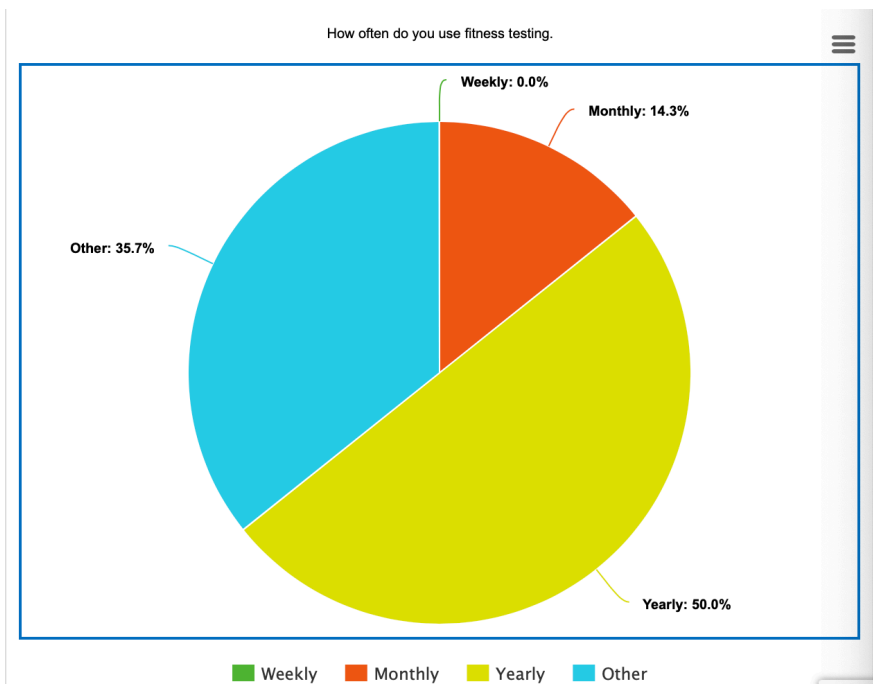


Do you use fitness testing in lessons:



Respondents:	Postive	Negative	Neutral
Respondent 1	Children need to be involved in choosing the fitness tests and understanding why they are used. I would also argue that children should use fitness testing to see their own improvements not be compared to others - this is key to their use in Physical Education lessons	N/A	Fitness testing are helpful when done in a meaningful way.
Respondent 2	To promote lifelong physical activity participation and to educate pupils on their bodies and how nutrition and physical activity can help to have a healthy lifestyle and better mental well-being.	N/A	N/A
Respondent 3	It helps to teaching the components of fitness and identify areas of both strength and weakness.	N/A	No one is put under pressure if they do not perform well.
Respondent 4	N/A	Selection process for cross country events.	N/A
Respondent 5	To give pupils an understanding of why testing can be used to improve performance.	N/A	N/A
Respondent 6	N/A	We feel that the research around testing in KS3 doesn't really point anymore in it being good practice	It is only primarily done now at KS4 for examination and coursework aspects
Respondent 7	Baseline data and so that pupils can see improvements	N/A	N/A
Respondent 8	We use Fitness testing in the Y9 Fitness SOW to show the students what they can do to improve that aspect of fitness and see how they do. We discuss how teams/ work professions might use to test so they might need it in later life.	N/A	I also use fitness tests GCSE PE as the students need to learn the content and use it for their coursework which is part of their course.
Respondent 9	Respondent 9: To help students understand that there are different types of fitness and they may have areas of strength and areas to improve.	N/A	Also allows students to make see progression throughout their time in school
Respondent 10	N/A	N/A	:It's part of the curriculum and helps prepare them for careers in sports where they would design fitness programs for clients (they design their own program to improve).
Respondent 11	children see the growth in their fitness levels.	N/A	N/A
Respondent 12	N/A	N/A	N/A
Respondent 13	N/A	N/A	Understand how fitness is measured and to develop early understanding of fitness testing for gcse
Respondent 14	N/A	N/A	To give the pupils a baseline and to see if they can improve over time.
Respondent 15	N/A	N/A	GCSE PE
Respondent 16	We do not fitness test students however all KS3 students will fulfil a HRF (Health related fitness) unit. The purpose of this unit is to learn physiological advantages of exercise as well and discussing methods of training and components of fitness.	N/A	N/A

Respondents:	Postive	Negative	Neutral
Respondent 1	N/A	N/A	N/A
Respondent 2	N/A	N/A	N/A
Respondent 3	N/A	N/A	N/A
Respondent 4	N/A	N/A	N/A
Respondent 5	N/A	N/A	N/A
Respondent 6	N/A	Research is pointing towards it being an a non productive process in KS3 for many and may devalue the ethos of our department	N/A
Respondent 7	N/A	N/A	N/A
Respondent 8	N/A	N/A	N/A
Respondent 9	N/A	N/A	N/A
Respondent 10	N/A	N/A	N/A
Respondent 11	N/A	N/A	N/A
Respondent 12	N/A	Never felt the need.	N/A
Respondent 13	N/A	N/A	N/A
Respondent 14	N/A	N/A	N/A
Respondent 15	N/A	N/A	N/A
Respondent 16	N/A	N/A	As above



Respondents:	Positive	Negative	Neutral
Respondent 1	For children to develop understanding of goal setting around their engagement with physical activity; also knowledge around sports performance; elements of a fitness unit of work.	N/A	N/A
Respondent 2	To provide a different skill set for students which they can use if they want to continue to be physical active in a range of activities.	N/A	N/A
Respondent 3	N/A	N/A	Helps to indicate areas of weakness that you can then address in fitness lessons
Respondent 4	N/A	Monitor progress.	N/A
Respondent 5	N/A	N/A	:It helps pupils set individual targets and assess their strengths and areas for improvement.
Respondent 6	N/A	N/A	:Obtain information for KS4 work
Respondent 7	N/A	N/A	Provides information on what to areas of fitness to concentrate on.
Respondent 8	N/A	N/A	As an educational purpose on how they can measure their specific fitness against normative data.
Respondent 9	Educate students on the different components of fitness and how they individually aid sporting performance as well as making personal progress	N/A	N/A
Respondent 10	N/A		To design a program for improvement and see if the program was effective.
Respondent 11	N/A	N/A	So children can see their fitness levels growing.
Respondent 12	N/A	:I don't really see it as important role.	N/A
Respondent 13	For pupils to understand their fitness levels and their impact of their fitness on their health	N/A	N/A
Respondent 14	N/A	Benchmarking pupils for them to see improvement over time.	N/A
Respondent 15	Individuals could have fitness goals but it should be their choice	Not for it to be done as whole classes,	N/A
Respondent 16	Physical Education is about learning through physical activity	therefore bespoke fitness testing sessions have no place on the curriculum.	N/A

Respondents:	Postive	Negative	Neutral
Respondent 1	yes, development of knowledge and understanding around sport performance; development of knowledge and understanding around personal goal setting around engagement in physical activity	N/A	N/A
Respondent 2	:Health benefits such as improving cardiovascular health, strength, and agility to participate in sports in and outside of school.	N/A	N/A
Respondent 3	:Highlighting strengths and weakness	particularly helpful with gifted and talented	N/A
Respondent 4	N/A	We use the 12 minute run which also aids selection process for cross country team.	Simple way to track progress and highlight to students expected levels with links to health.
Respondent 5	N/A	N/A	Pupils can assess themselves against normalised data to see where their fitness lies.
Respondent 6	The maturity effect also hinders the process and we would rather get pupils moving more	However, after getting the information not a lot is then done with this at KS3 and lots of the information is actually meaningless to pupils.versus doing these test. We do fall back on them as a last resort when the weather is really poor and we have no other option.	As i have mentioned we have evolved our thinking around this. We used to it in all year groups and some pupils do like do enjoy it.
Respondent 7	N/A	N/A	Yes, monitor improvements and compare to the norm
Respondent 8	Also for them to see what is needed for professions	N/A	Yes- for them to measure their different types of fitness and how to run it
Respondent 9	increased knowledge and understanding.	N/A	N/A
Respondent 10	if they go into a career where they would design programs for clients.	N/A	Students can use the process of designing fitness programs and reflecting on them to help them with their own fitness programs
Respondent 11	N/A	N/A	Children should see growth if they keep tabs. We use a fitness sheet .
Respondent 12	N/A	N/A	N/A
Respondent 13	N/A	N/A	Yes, for pupils to know current fitness levels and whether their fitness levels have improved when compared against previous scores
Respondent 14	N/A	Yes fitness testing is measurable and gives the teachers / pupils something to compare themselves to over time.	N/A
Respondent 15	Depends on the individuals and how the fitness tests are delivered	N/A	N/A
Respondent 16	N/A	N/A	it provides a good opportunity to assess the students physically at the beginning of an academic year.

Respondents:	Positive	Negative	Neutral
Respondent 1	N/A	:yes, when not done correctly, testing can be used out of context. testing could embarrass and ridicule children if results are shared or their performance is considered poor compared to norms . Many fitness tests used with children are not valid or reliable for national/norm comparison testing because they are not designed to be used with the younger population	N/A
Respondent 2	N/A	Students comparing themselves to normative data and to their peers. This could potentially affect their outlook on fitness and physical activity.	N/A
Respondent 3	N/A	Low ability students can feel disheartened	N/A
Respondent 4	N/A	:Can be demotivating for some students, particularly if you do not do a range of tests which may cater for students strengths. Maximal tests such as bleep test can be dangerous.	N/A
Respondent 5	N/A	Anxiety, pupils can be conscious of performing poorly.	N/A
Respondent 6	N/A	vague and don't consider the biological effect of pupils	N/A
Respondent 7	N/A	Some pupils find it uncomfortable	N/A
Respondent 8	make it a whole class activity to reduce this	The main ones are if children are not very fit which highlights this.	N/A
Respondent 9	N/A	Students may feel disappointed or embarrassed about the result	N/A
Respondent 10	N/A	Some students feel uncomfortable testing themselves and compare themselves to peers. But this happens in all subjects.	N/A
Respondent 11	N/A	N/A	N/A
Respondent 12	N/A	I believe it could cause a divide between types of students.	N/A
Respondent 13	N/A	No.	N/A
Respondent 14	N/A	Too much emphasis can be on fitness testing and data and can overshadow more important aspects such as skills and vision.	N/A
Respondent 15	N/A	Can cause humiliation for some children and put them off PE	N/A
Respondent 16	N/A	N/A	:I don't believe fitness testing sessions alone have a place on the curriculum other than if required for KS4 theory coursework.

Respondents:	Positive	Negative	Neutral
Respondent 2	Create content which is more up to date and creative.	move away from traditional types of fitness testing such as the bleep test	N/A
Respondent 3	:To not put too much pressure on the results and outcomes	N/A	Use them as a teaching aid.
Respondent 4	N/A	N/A	:Ensure they are explained with the purpose with links to health monitoring.
Respondent 5	Make it fun and enjoyable, not put pressure on pupils to be excellent in every test, make pupils aware of the benefits to testing and how it is used in the world of work.	N/A	N/A
Respondent 6	N/A	N/A	:Value of time taken and meaningful information taken from them
Respondent 7	Results must be discreet	N/A	N/A
Respondent 8	N/A	N/A	Education purposes and lots of students enjoy it!
Respondent 9	The result is personal to the performer and comparisons should not be made between students. Emphasis should be on that everyone will have an area of fitness they are stronger in & an area that they could improve.	N/A	For example one student may excel at power / vertical jump, but find CV endurance difficult (vice versa)
Respondent 10	Ensure it is a safe space and all students feel supported and understand that the goal is improving their own personal results	not trying to beat others in the class.	N/A
Respondent 11	N/A	N/A	It's a way to keep up with growth in your students
Respondent 12	Have a clear plan as to the reason behind using fitness testing.	N/A	N/A
Respondent 13	N/A	N/A	What types of fitness to measure and the range of fitness levels in your classes
Respondent 14	N/A	N/A	:To ensure that all pupils complete the fitness tests correctly and there is a consistent approach throughout.
Respondent 15	That it's inclusive. Children have a choice. Need to be educated why looking after the body is important, for some this may not require children to test it	N/A	N/A
Respondent 16	:Fitness testing must only be used if they have a clear objective	N/A	the data will provide meaningful data etc.

Respondents:	Postive	Negative	Neutral
Respondent 1	consider the inclusion of the whole class	if fitness testing does not fit the group do not use them	Age should be an important consideration
Respondent 2	Be aware of new concepts and try to implement them alongside more common fitness tests.	N/A	:Don't be afraid to include fitness testing into your PE lessons.
Respondent 3	make them fun and be clear	N/A	N/A
Respondent 4	. Explain why you are doing them.	N/A	Emphasis on personal performance and progress rather than comparison with others.
Respondent 5	Give pupils responsibility for running the tests themselves rather than it being teacher led lessons. Make sure pupils are aware of validity and reliability.	N/A	N/A
Respondent 6	Setting the tests up with the correct 'mind set' process over outcome can be helpful	N/A	N/A
Respondent 7	Keep results discreet and use the results to improve their fitness levels	N/A	N/A
Respondent 8	Try keep it fun and engaging as possible for example the Bleep test- do it in teams of 3/4 to make it more of a team event	N/A	N/A
Respondent 9	Emphasis on knowledge of how to perform the test, the purpose of the test. How the test can aid performance.	N/A	N/A
Respondent 10	N/A	N/A	As above.
Respondent 11	Keep it fun!	N/A	N/A
Respondent 12	N/A	Is it necessary? What will you achieve??	N/A
Respondent 13	develop pupils understanding towards fitness.	N/A	Encourage pupils to give their all for the results and scores to accurate and reliable
Respondent 14	consider other aspects such as skills and technique.	Use fitness tests to benchmark pupils	N/A
Respondent 15	Pupil voice would be important, while some may be interested in testing others may not. What's more important is getting children to understand how their bodies work i.e. functional movement, learning correct techniques, trying a variety of activities to keep them fit and healthy	N/A	: I think there is a place for it at GCSE and A level PE, but not with younger age groups.
Respondent 16	N/A	N/A	Consider what the objective of the fitness testing is and how/if it assists the delivery of a curriculum.

Appendix E- Coded data from thematic analysis

Codes:

- Health (obesity, fitness)
- Acknowledgement of strengths (Positives, benefits, feeling good)
- Acknowledgement of barriers (discomfort, uncomfortable, anxiety, displeasure)
- Beliefs (I do not, I think, I believe)

Respondent	Response: What are your views on the role of PE in the battle against the current obesity crisis?
1	PE definitely plays a role. Children in the UK all are able to access PE in some form therefore, PE should offer important healthy active lifestyle information that may support lowering the levels of obesity.
2	I believe that the governments are targeting PE as a subject within the curriculum and physical educators policy actors who can help to eradicate the obesity crisis and aid the view on public health. Although it is important that we do aim to lessen the impact of the obesity epidemic, I feel strongly that it should be a while school approach and not just PE's responsibility to do this.
3	Its very challenging to hit the situation head on with extra pressures on mental health and fat shaming issues.
4	Very important. Facilitates exercise in young peoples. Promotes a healthy active lifestyle. Helps aid students in maintain activity levels after they have left education.
5	PE as parter of a wider health and well-being role is key.
6	Obviously important - however, the challenge is clearly multi-faceted and not laid solely on PE in school. The amount of time some pupils will receive per week will make a minimal impact at best
7	PE is extremely important to set the foundation for physical activity for life. It is also an opportunity to educate about the health benefits of physical edication
8	Very important- but I think it is important to educate students to find types of exercise/sports they enjoy doing to ensure they participate outside of school and into the future.
9	I feel it is vital. Students need to be active and be taught the importance of exercise in relation to health
10	Doesn't make a difference. Year 11 & 12 health might as it teaches nutrition.
11	Our emphasis is teaching and educating children that being physically fit is important. It's about feeling good about yourself.
12	I believe PE plays a pivotal role on the curriculum. Sue to the range of subjects taught in secondary PE is often overlooked as a core subject.
13	Children's fitness levels are declining and attitudes towards fitness are definitely changing. Pupils are less motivated to push themselves and work hard on their fitness
14	I think PE is crucial as children spend more time on the computers at home now. PE is the only time some pupils will have an opportunity to keep fit and healthy.
15	It's complex, PE does have a role in educating children about their bodies
16	While I believe PE plays a significant role in the health and well-being of young people, the current curriculum allowance of 2 hours per week is not sufficient to completely tackle obesity.

Respondent	Response: 7.If yes what are the main reasons to why you implement fitness testing
1	develop knowledge and understanding of goal setting. Fitness testing are helpful when done in a meaningful way. Children need to be involved in choosing the fitness tests and understanding why they are used. I would also argue that children should use fitness testing to see their own improvements not be compared to others - this is key to their use in Physical Education lessons
2	To promote lifelong physical activity participation and to educate pupils on their bodies and how nutrition and physical activity can help to have a healthy lifestyle and better mental well-being.
3	It helps to teaching the components of fitness and identify areas of both strength and weakness. No one is put under if they do not perform well.
4	Challenge. Monitor. Selection process for cross country events.
5	To give pupils an understanding of why testing can be used to improve performance.
6	Our reasons have evolved over the year's. It is only primarily done now at KS4 for examination and coursework aspects. We feel that the reasrach around testing in KS3 doesn't really point anymore in it being good practice
7	Baseline data and so that pupils can see improvements
8	We use Fitness testing in the Y9 Fitness SOW to show the students what they can do to improve that aspect of fitness and see how they do. We discuss how teams/work professions might use to test so they might need it in later life.. I also use fitness tests GCSE PE as the students need to learn the content and use it for their coursework which is part of their course.
9	To help students understand that there are different types of fitness and they may have areas of strength and areas to improve. Also allows students to make see progression throughout their time in school
10	It's part of the curriculum and helps prepare them for careers in sports where they would design fitness programs for clients (they design their own program to improve).
11	So children see the growth in their fitness levels.
13	Understand how fitness is measured and to develop early understanding of fitness testing for gcse
14	To give the pupils a baseline and to see if they can improve over time.
15	GCSE PE
16	We do not fitness test students however all KS3 students will fulfil a HRF (Health related fitness) unit. The purpose of this unit is to learn physiological advantages of exercise as well and discussing methods of training and components of fitness.

Respondent	Response: 8. If no, what are the specific reasons to why you do not use fitness testing
6	Research is pointing towards it being an a non productive process in KS3 for many and may devalue the ethos of our department
12	Have never felt the need.
16	As above.

Respondent	Response: 11. What do you consider the role of fitness testing in school to be
1	For children to develop understanding of goal setting around their engagement with physical activity ; also knowledge around sports performance ; elements of a fitness unit of work.
2	To provide a different skill set for students which they can use if they want to continue to be physical active in a range of activities .
3	Helps to indicate areas of weakness that you can then address in fitness lessons
4	Monitor progress.
5	It helps pupils set individual targets and assess their strengths and areas for improvement .
6	Obtain information for KS4 work
7	Provides information on what to areas of fitness to concentrate on.
8	As an educational purpose on how they can measure their specific fitness against normative data .
9	Educate students on the different components of fitness and how they individually aid sporting performance as well as making personal progress
10	To design a program for improvement and see if the program was effective.
11	So children can see their fitness levels growing.
12	I don't really see it as important role.
13	For pupils to understand their fitness levels and their impact of their fitness on their health
14	Benchmarking pupils for them to see improvement over time.
15	Not for it to be done as whole classes , individuals could have fitness goals but it should be their choice
16	Physical Education is about learning through physical activity and therefore bespoke fitness testing sessions have no place on the curriculum .

Respondent	Response: 12. Are there any benefits to fitness testing if you believe there is please explain your thoughts.
1	yes, development of knowledge and understanding around sport performance; development of knowledge and understanding around personal goal setting around engagement in physical activity
2	Health benefits such as improving cardiovascular health, strength, and agility to participate in sports in and outside of school.
3	Highlighting strengths and weakness- particularly helpful with gifted and talented
4	Simple way to track progress and highlight to students expected levels with links to health. We use the 12 minute run which also aids selection process for cross country team.
5	Pupils can assess themselves against normalised data to see where their fitness lies.
6	As i have menrioned we have evolved our thinking around this. We used it in all year groups and some pupils do like do enjoy it. However, after getting the in-formation not a lot is then done with this at KS3 and lots of the information is actually meaningless to pupils. The maturity efect also hinders the process and we would rather get pupils moving more versus doing these test. We do fall back on them as a last resort when the weather is rally poor and we have no other option.
7	Yes, monitor improvements and to the norm
8	Yes- for them to measure their different types of fitness and how to run it. Also for them to see what is needed for professions
9	Increased knowledge and understanding.
10	Students can use the process of designing fitness programs and reflecting on them to help them with their own fitness programs or if they go into a career where they would design programs for clients.
11	Children should see growth if they keep tabs. We use a fitness sheet .
13	Yes, for pupils to know current fitness levels and whether their fitness levels have improved when compared against previous scores
14	Yes fitness testing is measurable and gives the teachers / pupils something to compare themselves to over time.
15	Depends on the individuals and how the fitness tests are delivered
16	The only benefit you might have is during Y7 baseline testing- it provides a good opportunity to assess the students physically at the beginning of an academic year.

Respondent	Response13.Are there any drawbacks to fitness testing please explain your thoughts.
1	yes, when not done correctly, testing can be used out of context. testing could embarrass and ridicule children if results are shared or their performance is considered poor compared to norms. Many fitness tests used with children are not valid or reliable for national/norm comparison testing because they are not designed to be used with the younger population
2	Students comparing themselves to normative data and to their peers. This could potentially affect their outlook on fitness and physical activity.
3	Low ability students can feel disheartened
4	Can be demotivating for some students, particularly if you do not do a range of tests which may cater for students strengths. Maximal tests such as bleep test can be dangerous.
5	Anxiety, pupils can be conscious of performing poorly.
6	they are vague and don't consider the biological effect of pupils
7	Some pupils find it uncomfortable
8	The main ones are if children are not very fit which highlights this. But I always try (when I can) to not make it a whole class activity to reduce this
9	Students may feel disappointed or embarrassed about the result
10	Some students feel uncomfortable testing themselves and compare themselves to peers. But this happens in all subjects.
12	I believe it could cause a divide between types of students.
13	No.
14	Too much emphasis can be on fitness testing and data and can overshadow more important aspects such as skills and vision.
15	Can cause humiliation for some children and put them off PE
16	I don't believe fitness testing sessions alone have a place on the curriculum other than if required for KS4 theory coursework.

Respondent	Response: In your view, what are the important aspects for teachers to consider if implementing fitness testing in schools?
1	testing should be used in a meaningful ways and children should have chosen over their engagement with them
2	Try to move away from traditional types of fitness testing such as the bleep test. Create content which is more up to date and creative.
3	To not put too much pressure on the results and outcomes. Use them as a teaching aid.
4	Ensure they are explained with the purpose with links to health monitoring.
5	Make it fun and enjoyable, not put pressure on pupils to be excellent in every test, make pupils aware of the benefits to testing and how it is used in the world of work.
6	Value of time taken and meaningful information taken from them
7	Results must be discreet
8	Education purposes and lots of students enjoy it!
9	The result is personal to the performer and comparisons should not be made between students. Emphasis should be on that everyone will have an area of fitness they are stronger in & an area that they could improve. This will be different for everyone. For example one student may excel at power / vertical jump, but find CV endurance difficult (vice versa)
10	Ensure it is a safe space and all students feel supported and understand that the goal is improving their own personal results, not trying to beat others in the class.
11	It's a way to keep up with growth in your students
12	Have a clear plan as to the reason behind using fitness testing.
13	What types of fitness to measure and the range of fitness levels in your classes
14	To ensure that all pupils complete the fitness tests correctly and there is a consistent approach throughout.
15	That it's inclusive. Children have a choice. Need to be educated why looking after the body is important, for some this may not require children to test it
16	Fitness testing must only be used if they have a clear objective and the data will provide meaningful data etc.

Respondent	Response15. What advice would you give to newly qualified teachers when considering the use of fitness testing in schools?
1	consider the inclusion of the whole class if fitness testing does not fit the group do not use them . Age should be an important consideration - older key stage 3 to key stage 4 are more suited to knowledge development around fitness testing
2	Don't be afraid to include fitness testing into your PE lessons . Be aware of new concepts and try to implement them alongside more common fitness tests.
3	Use them make them fun and be clear on the purpose and how results will be used.
4	Use a variety which hopes to highlight strengths from all the group. Explain why you are doing them . Revisit to track progress. Emphasis on personal performance and progress rather than comparison with others .
5	Choose tests carefully based on the levels of pupils. Give pupils responsibility for running the tests themselves rather than it being teacher led lessons. Make sure pupils are aware of validity and reliability.
6	Consider their place and timing and what are objectives of doing them. Setting the tests up with the correct 'mind set' process over outcome can be helpful
7	Understand the protocol and safety is paramount.Keep results discreet and use the results to improve their fitness levels
8	Try keep it fun and engaging as possible for example the Bleep test- do it in teams of 3/4 to make it more of a team event
9	Emphasis on knowledge of how to perform the test , the purpose of the test. How the test can aid performance.
10	As above.
11	Keep it fun!
12	Is it necessary? What will you achieve??
13	Use it to measure fitness and develop pupils understanding towards fitness . Encourage pupils to give their all for the results and scores to accurate and reliable
14	Use fitness tests to benchmark pupils but ensure that they consider other aspects such as skills and technique.
15	I think there is a place for it at GCSE and A level PE , but not with younger age groups . Pupil voice would be important, while some may be interested in testing others may not . What's more important is getting children to understand how their bodies work i.e. functional movement, learning correct techniques, trying a variety of activities to keep them fit and healthy