Guide on completing a PEP

Contents

Structure of the PEP

It is important to remember that if a candidate does not improve their performance, they can still access higher band marks, provided they **justify** the reasons in detail and show analysis and evaluation. For example, if a candidate did not improve their performance, they would have to justify why - due to time restrictions, technique, injury.

Each candidate must complete a **PARQ** – this should be placed in the appendix. **Reference** must be made in the main body of the PEP to the PARQ and its relevance, although this can be quite brief. The appendices do not count towards the word count and are not marked, they should be used to hold, pertinent additional word information that can be referenced in the main body of the PEP to help justify planning, analysis and evaluation.

Candidates should base their coursework around a **discussion** on the analysis and evaluation of their PEP. It is recommended that supporting evidence is included in the appendix: e.g. fitness test results, analytical data generated through performance or notational analysis, training logs, to support candidate arguments and findings. Candidates must **link and reference** evidence/stats in their appendices to support statements and findings which they have discussed in the main body of the PEP.

In short, candidates need to gather as much analytical or notational evidence as possible to support improvements made in their chosen sport/activity. Therefore, the use of data needs to be more critical to understand the **effectiveness** of the PEP, allowing the moderator to assess that the candidate understands the impact their training had on their performance throughout the PEP.

Aim and Planning

The PEP is used to assess candidates' skills in **analysing** and **evaluating** their personal fitness to improve/optimise an aspect of their sporting performance.

It is important that candidates clearly **introduce** themselves and **state** the physical activity which they aimed to improve/optimise their performance in.

To support candidates in demonstrating their analysis skills, they will need to collect **data** from a game/activity identifying their **current** level of performance within their selected sporting activity, then collect data on their **starting** level of fitness.

> The **aim** of a candidate's Personal Exercise Programme for GCSE PE should be to **optimise/ improve an aspect of their sporting performance** in an activity from the activity list in component 3.

An example of game/activity data would be the number of interceptions in a game of netball, the number of line breaks in rugby, the time to complete 3000m in athletics or increasing the distance thrown in javelin.

Although candidates may be able to identify several weaknesses, it is important for candidates to concentrate on **one area of their performance** and associated, relevant aspect of fitness. This allows the possibility of **realistic, measurable improvement** e.g. I run 100m in 14.3 secs; I want to improve my speed so that I can reduce my time to 14.2 secs over the six-week training period.

It is important that the selected area of their performance to improve/optimise is **justified**, i.e. why they have selected that particular area of performance for improvement. This might come about from their performance analysis and/or a conversation with their coach/teacher.

The collated performance data enables candidates to both analyse and evaluate the **effectiveness** of their training programme. They may know, for example, through their fitness data, that their power has increased and as such this has impacted on the number of positive tackles they have made in rugby. This **impact** on performance can therefore be measured via a simple data collation process.

Interpretation of fitness test results using data

Once the candidate has collected performance data, they must carry out **appropriate fitness tests** (they could be those listed in the spec, and/or other test/s).

A candidate may wish to run a battery of fitness tests to cover a range of components of fitness initially and this is perfectly acceptable. To support this, it would be deemed good practice to select tests which are relevant and appropriate to the acknowledged components of fitness and sporting activity.

> The first bullet point on the assessment criteria relates to how the candidate **interpreted** and **analysed** their fitness test results using their performance **data**.

Within the analysis candidates can then comment on the tests **suitability.** When, retesting, only the relevant fitness tests need to be conducted.

After candidates identify an area to improve/optimise performance through all the data collated, sporting and fitness test data, they should make a judgement about which **component of fitness** they think they should work on to bring about optimum performance. It is good practice for candidates to focus on **one** component of fitness. If more than one component of fitness is selected, candidates should fully justify its inclusion.

> *"My fitness test data collated shows my cardiovascular fitness is rated as good, my speed as average. My qualitative data highlights that my cardiovascular fitness is a weakness as I tend to decrease intensity in long repetition runs and struggle to maintain negative splits throughout my 3000m races slowing by 1 second per lap on average."*

Both examples combine interpretation and analysis of the data collated related to their sporting performance.

ℹ️ It is vitally important that the **main aim** of the PEP is arrived at **after** the **initial analysis** of all the fitness and sporting data has been collated, interpreted and analysed.

> *"My fitness tests revealed that my speed and strength are both excellent, whereas my power results were only above average. Currently, I am only breaking the line twice per rugby match but attempting to by 15 times on average."*

Evaluation and justification for method(s) of training, SMART targets and principles of training

Having made a reasoned judgement about the component(s) of fitness and performance weakness to improve, it is time to select an **appropriate training method** to achieve this. The reasons for its selection and starting training intensities must be **justified,** having analysed their fitness test data. If more than one method of training is selected, candidates should fully justify its inclusion. It must be clear why this is the **best** training method to use given the **overall aim**. However, it is recommended that candidates select one method of training. This again enables the candidate to be very focused in their work. Throughout this section there is a good opportunity for candidates to demonstrate their understanding of the **theoretical knowledge** learnt from other components of the course.

> The second bullet point of the criteria refers to the **evaluation** of the selected **training method** and the application of **SMART targets** and **training principles**.

For example, a footballer may wish to improve CV fitness due to a dip in performance in the later stages of the game (taken from the supported data, pre-PEP). Both continuous and fartlek training could be used, but one will be more suited to their sport than the other. The candidate should acknowledge this and justify the choice they make.

Centres should allow candidates a free choice around the method of training they select, making the PEP, **personal** and **individualised**. (See both examples below)

"To improve my 3000m performance, I have selected continuous training between 30-60 minutes. This is the most effective method of training to improve cardiovascular fitness, involving constant effort within the aerobic training zone, increasing aerobic capacity and adaptations for 3000m. Fartlek training is less specific to the 3000m due to constant variation in pace."

"Plyometrics focus on improving power by combining speed (explosive movements) and strength (body weight) training resulting in stronger, faster actions like running attacking lines or bouncing off tacklers. I could use weight training to develop my muscular strength but plyometrics enables me to use muscles to perform their maximum contractions faster and more powerfully in short bursts. This replicates what happens in rugby."

Predetermined training methodologies may disadvantage students.

Candidates must devise SMART targets (linked to fitness and performance) and then briefly justify **why their targets are SMART**. The justification must relate to **improving a component of fitness** which ultimately **improves their sporting performance**. Data driven targets are much easier to then analyse and evaluate later in the write up. Consideration should be given to ~~both~~ a **fitness test target** linking to a **sporting performance target**. Please ensure that this is discussed in your evaluation and analysis.

The assessment criteria do not reward any marks for definitions or descriptions of the SMART targets, therefore these should not be included. Each **relevant** element of SMART should be expanded to explain how it impacts upon their sporting performance.

⚠️ Candidates should explain how they **initially** intend to **apply** the relevant training principles to their selected training method to help them achieve their SMART target, although it is possible that this could **change** as the programme progresses and session evaluations impact on their training programme. Programmes may change as a result of adaptations made after sessions. Changes must be referenced on the training logs.

Training principles should be fully considered before training starts. Again, this is an opportunity for candidates to demonstrate their theoretical knowledge. In addition to considering progressive overload during the **planning** phase, it is better to **adapt** the training as the PEP progresses over time based upon their individual training or weekly evaluations noted on the training record form. e.g. if using circuit training, candidates may have initially planned to reduce the rest period between stations by 10 seconds each week but after evaluating how well they feel they are physically adapting they may wish to reduce the rest period by larger or smaller amounts. This programme develops over time based upon the candidate continuously evaluating. The pre-PEP plans will be based on the candidate's level of fitness taken from the initial analysis of the pre-PEP data.

Candidates are not expected to cover all the SMART/FITT principles of training – only those that are **relevant** to their fitness and performance goals. However, those discussed should be fully applied to their programme.

> *"I will apply the thresholds of training by training within my aerobic zone (intensity), calculated using the Karvonen formula (122-163bpm), ensuring specificity as 3000m is mainly aerobic. Ensuring gradual progressive overload, I will increase only one difficulty aspect each session (time/speed) and will train only 3 sessions weekly (frequency) using continuous training (type), decreasing potential for injury and the reversibility principle upon injury. To avoid overtraining, I will include 2+ days between sessions for rest and recovery and every fortnight will replace running with cycling, less pressure on. My joints giving longer to replenish energy stores and reduce fatigue."*

Carrying out the PEP

Although no marks are awarded for this strand of the work – the **training logs** (either centre-devised, or from the specification, page 47: Appendix 3) are essential to provide all the relevant data which candidates need in order to be able to meet the requirements of the assessment criteria. It is important that candidates produce a record for each training session completed during the period of the PEP.

Candidates should ensure that they **adapt** their programme as required. Adaptations should be noted/explained on the training record form, then analysed and evaluated for their impact on fitness and performance in the write up of the PEP.

> There should be evidence in the appendix for **each training session** mentioned in the PEP e.g. if a candidate carries out training three times a week for 6 weeks – there should be 18 record sheets.

It is also worth noting here that **performance data** (in relation to the SMART target) can also be collected, ideally throughout the duration of the PEP. E.g. If the weakness was a number of unforced errors in the last set in tennis then it is advisable to continue to record this data when matches are played to see if PEP is being effective. Suitable adjustments could then be made if required.

An example of the type of data to collect when monitoring the heart rate during cardiovascular exercise includes pre-exercise RHR, WHR and RR (at one-minute intervals for five minutes). Similarly, when exercising to improve muscular endurance, the number of repetitions should be measured, considering the number of repetitions completed without stopping and the decrease in recovery time between sets of repetitions.

Comparison and interpretation of the fitness test results

At the end of the programme the candidate needs to **retest** their fitness (of relevant fitness tests) and collect performance data (this should be the **same** performance data as at the start of the PEP). This data combined with ongoing weekly adaptation on the session sheets should be used to allow them to make direct comparisons and evaluate whether their SMART targets were met.

> The third bullet point relates to the **comparison** and **interpretation** of the fitness test results.

For example, if the fitness target was CV related and concerned with running further during the 12 minute Cooper Run – the candidate would then collect data from a post-PEP 12 minute Cooper Run to enable them to make a direct comparison.

Candidates should **analyse** the data and provide a summary to demonstrate the **differences** in the fitness and performance data pre and post PEP. The summary could be done in a table form or pictorially represented in a chart/graph. As with any data, if it is summarised in an appendix it must referenced and discussed in the main body of the PEP.

Candidates should discuss the **reasons** for any **differences** or **similarities** in the results, and what the results mean in terms of their **SMART targets**.

Any further **supporting** evidence collected during the PEP should be placed in the appendix and referenced in the main body here, e.g. match statistics, a coach's/teacher's perspective as well as fitness progress to inform the discussion of the results.

Evaluation of the application of the method(s) of training, SMART targets and principles of training with justified future recommendations

To address this criterion, candidates need to consider whether the selected method of training; SMART targets and principles of training **worked as intended**; whether they were **well applied** and their **impact** overall on their sporting performance based upon the data analysis.

The fourth bullet point of the criteria relates to the **evaluation** of the application of the training method(s), SMART targets and training principles, as well as **justified recommendation** for future training and performance improvements

It is good practice for candidates to refer to their training record forms when writing this section, drawing upon their thoughts as the PEP progressed. This will show how the candidate adapted their programme as it progressed and state why the adaptations were made.

The examples below clearly evaluate how continuous training, the fitness SMART target and principles of training were applied to make improvements in their fitness levels and consequently their performance level.

"Continuous training was an effective method of training as it improved my 3000m by 16 seconds which was the primary focus of my PEP. The training involves no rest and it has helped me maintain higher intensities for longer when racing without fatigue improving my cardiovascular fitness."

"Achieving Smart target 1 (12-minute Cooper run – 3100m) shows clear improvement in cardiovascular fitness to sustain faster speeds over 12 minutes, also this is reflected in my coach's qualitative analysis. My recovery time has decreased in my final three sessions (5 to 4 mins post PEP), highlighting improved aerobic capacity. This progression increased cardiac output explaining my ability to achieve negative splits when racing, now with the endurance to avoid slowing."

"Throughout the PE, I effectively applied principles of training including progressive overload to achieve increased workload. By increasing the speed or length of each run, my body adapted to increased workloads, leading to fitness gains, improving my 3000m performance."

Based on their evaluation of the selected method(s) of training; SMART targets and principles of training, candidates should then be able to identify what aspects of their programme should be changed to further improve the outcomes and be able to **justify** why.

This might be as drastic as a **change** in method of training if fitness and performance didn't improve as intended or, now that the body had adapted to the training, how the training might be **amended** to continue to cause adaptations to further improve performance.

"Having improved cardiovascular fitness, in future I will focus on speed as well helping me overtake opponents when coming into the home straight, which will further improve my performance. Targeting speed, I will use interval training, involving short sprint repetitions within my anaerobic training zone (80-90%) and long recovery, allowing sufficient recovery time to maintain high intensities, leading to effective anaerobic gains."

Coherence and structure, use of appropriate terminology

In order to access the higher marks bands for this criterion, candidates must produce a succinct and coherently structured PEP which should be written as continuous prose. This means the planning (analysis) and evaluation sections should be covered with appropriate **content** and amount of **detail**; that appropriate, subject specific terminology should be used; that the content is predominantly correct and that the PEP is succinct enough to be within the **1500-word count**. Graphs and data in boxes do not count towards the final word count, but the candidate's own work in boxes are part of the total word count. Candidates could make use of the Appendix and place a training plan and any other evidence there, making reference to these in the analysis and evaluation part of the main body.

The fifth bullet point refers to the overall **coherence** of the PEP, how well it is **structured** and whether appropriate **terminology** was used.

Anything in the appendices will not be marked, therefore there should be no analysis or evaluation in the appendices. The **appendices** are there to **support** the information in the main body of the PEP. A moderator will look at the appendices to gather more information e.g., PARQ, fitness test results, analytical data generated through performance and training logs. Information about warm up and cool down is not required.

The common theme running throughout the write up is to **improve/optimise performance in a chosen physical activity**. Candidate's should be reminded that, ultimately, this is what the PEP is about and as such they should continuously be reminded to return to this within their write up. Centres should promote the work as being a personalised document.

Overview

A candidate may achieve one of five levels within the PEP. The first two bullet points in each level relate to the candidate's **planning** of the PEP based on their initial analysis of their performance and sport related fitness and their **evaluation** of the best approach to improve their performance.

The third and fourth bullet points relate to the candidate's post-PEP **analysis** and evaluation, and their **recommendation** for further training to improve their performance. The final bullet point relates to the overall **coherence** and conciseness of the candidate's PEP.

When assessing a PEP, it is important to remember that within one PEP there may be **strands of each level** of the assessment criteria. For example, a candidate may produce an excellent initial analysis (level 5) but only good evaluations post-PEP (level 3). Therefore, the teacher assessor should always refer to the assessment criteria on pages 33- 34 in the specification to ensure correct placement of a candidate's work. Each level relates to the quality of the work produced by the candidate.

Centres should always ensure they have read the "Examiner's Report, Principal Examiner Feedback" and the exemplar PEPs with the associated commentary on the website as well as the moderator's reports from previous series of exams.