



Pearson

INSIDE TRACK

Online magazine designed to support the
teaching of Pearson GCE PE | April 2019

Improving your coaching skills

The benefits of
learning from a
personal mentor

Also in this issue:

Matters of the Heart

Committing to memory

Mastering essay questions

Avoid feeling the heat

Welcome to the sixth edition of *INSIDE TRACK*, the online magazine designed to support the teaching of Pearson GCE PE.

This termly magazine provides material to support centres in their delivery of the course, specifically the 2016 specification, with articles written by senior examiners and guest writers, together with reviews of resources that may be helpful for teaching or background reading.

Get in touch

It is hoped that *INSIDE TRACK* will be a helpful resource for centres delivering the Pearson specification. If you have particular requests for how the magazine can support you, or wish to contribute, then please contact the editorial team at insidetrackpearson@hotmail.com or teachingpeandsport@pearson.com.

Support materials

Topic guides, which provide additional detail about the content requirements of the specification, sample assessment materials, coursework examples and other useful resources to support the delivery of the course are available [here](#).

Past issues

Did you miss an issue? Need to catch up? Just now discovered us and wondering what you missed? You can browse through the past editions of *Inside Track* [here](#).

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INSIDE TRACK is produced by Dennis Tattoo, Penny Lewis and Steve Tutt.

The heart of the topic

Principal Moderator **Dee Gannon** offers teachers some ideas on teaching about the structure of the heart

When answering questions about the heart, learners should be encouraged to ensure they know the correct names of all the components.

In previous exams, some answers have tended to link both sides of the heart together, with learners writing about both ventricles, atria and valves. But in order to score high marks, it needs to be clear that candidates understand what happens on the left side and the right side.

Remember: The **tRi**cuspid valve is on the **Ri**ght side (so the bicuspid must be on the left!). Detailed below are some ideas of how to approach teaching the order of the blood flow; having fun through a more practical approach can often enhance learning.

Set your gym up as a heart.

Use cones for the different chambers, veins and arteries; Blue for the right and red for the left.

Learners dribble the drop of blood (basketball) around the heart, reciting all the names as they go.

Depending on numbers in your group, they can role-play the valves opening and closing.

You can also use different coloured balls with a dark coloured ball being swapped at one basket (the lungs) for a redder colour, and vice versa at the other basket (blood going round the body).

HeART work

Get students to draw their own heart and label it with arrows showing the flow of blood. There are several good 'how to draw a heart' sites, even the worst artists (like me!) will be able to draw something that resembles the heart, and will certainly help to remember all the components. Learners can then trace the flow around the heart on their own drawing.

Be prepared to start from anywhere, not just the right atrium. Give learners individual labels of all the components and get them to stand up in order of the labels they have to show the blood flow, starting from different components each time.

Depending on numbers in your group, individuals may need more than one label, but it is best to try not to give them consecutive ones.

Having fun through a more practical approach like Dee Gannon has described above can enhance learning.

Students might find this link helpful: <https://www.wikihow.com/Draw-a-Human-Heart>



Memory systems explained

Principal Moderator
Andrew Armitstead
explains the role of
memory systems,
and the role they play in
sport performance.

KEY TERM DEFINITIONS

Short-term sensory store

All information from the environment enters the short-term sensory store. This can be millions of pieces of information per second but nearly all is discarded. Very little information is retained and passed on to the short term memory.

This is referred to as **selective attention**. Think about having a conversation in a busy restaurant, all input from all senses is ignored as you focus on what is being said to you.

Short-term memory

Information that is selected from the sensory store enters the short-term memory.

This is a temporary place for storing information, which can be processed through rehearsal and passed on to the long-term memory.

Larger pieces of information can be **chunked** together to aid processing. A good example of this is remembering a series of numbers as triple rather than single digits.

Long-term memory

This is the concept of a store retaining all those things we remember for a long time.

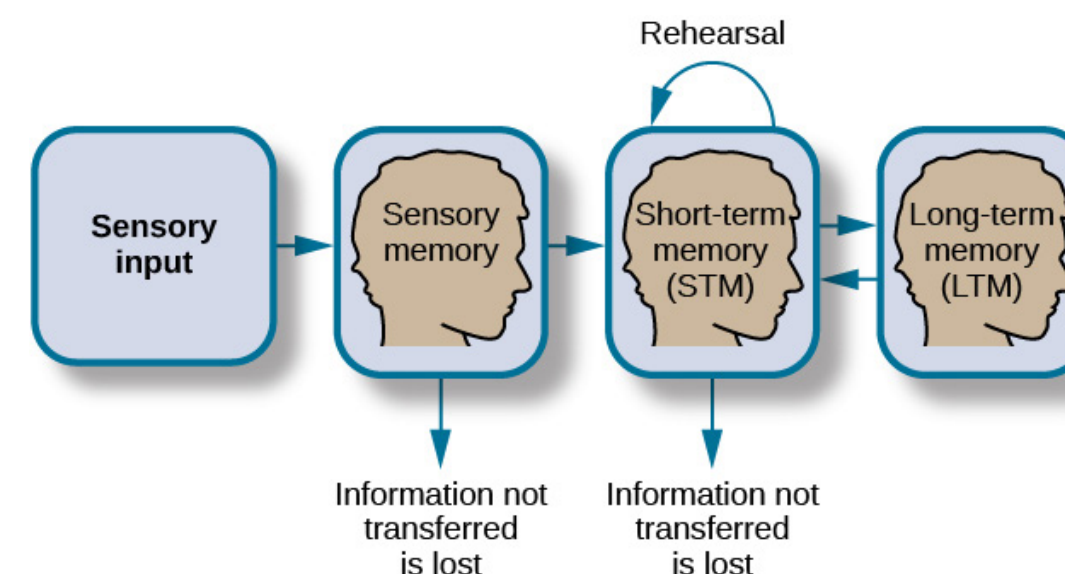
The **multi store model of memory** suggests that the short and long term memories work together to store information.

Once stored in the long-term memory, information can be recalled when needed.

CAPACITY, DURATION AND ENCODING

	Short-term memory	Long-term memory
Capacity (how much information can be stored)	Limited (5-9 items) (Jacobs, 1887)	Unlimited in theory (Solso, 1991)
Duration (how long does information remain in there)	Short (maximum of 30 seconds) (Peterson and Peterson, 1959)	Potentially forever (Bahrick, 1975)
Encoding (how does it stay there)	Acoustic (sound) (Baddley, 1966)	Semantic (meaning) (Tulvig, 1972)

HOW THEY WORK TOGETHER



APPLICATIONS TO SPORTS COACHING AND PERFORMANCE

Practices

Various theories exist as to how much practice is needed for skills to be learned i.e. stored in the long-term memory as schema. Whether you subscribe to 10,000 hours or 3,000 correct repetitions, the theory is still the same. Rehearsal leads to movement patterns and responses being learned (stored in the LTM).


Coaching

From a coaching perspective, consider how much information can be held in the STM when you are running a practice of a new skill. Also think about how long information lasts in the STM, and do not be surprised if your charges have forgotten after only one minute.

Elite performers

Lastly, a nod to David Epstein. That brilliant, defence splitting pass in netball, football, hockey or rugby is a result of short-term memory. The exponent has taken in all environmental information, extrapolated the movements of players, planned the trajectory of the ball and selected, from a range of schemas in the LTM, the correct response.

The brilliance is down to memory. Top players, those who attain real mastery, the Dan Carters and Lionel Messis of the world, have incredible processing functions in the short-term memory. It is this that sets them apart.



Improving the quality of coach performance in A Level PE

Candidates in the coach role need to be proactive in seeking regular feedback from a mentor; one way of improving performance.

Chief examiner Dennis Tattoo suggests ways in which those candidates who are being assessed as a coach might improve their skills.

In 2018, moderators commented that they were encouraged to see increased numbers of candidates choosing to be assessed in the role of coach.

It seems appropriate to suggest ways in which candidates, choosing the coach option, might further improve the quality of their work.

The United States Sports Academy (Frost, 2009), identified 17 key traits as essential for high quality coaching. The most important were identified as: a comprehensive knowledge of the sport; the ability to motivate athletes; communication skills (including listening to athletes); understanding the process of skill development; and the quality of practices.

Although not essential, a good starting point for most candidates would be to attend a National Governing Body Award in their chosen specialist sport. Level one awards, for example, offer an opportunity to be introduced to the core skills of coaching together with useful

practices and activities that can be used and adapted in the candidate's own setting.

Candidates should be encouraged to develop their coaching skills by working regularly with an advanced level coach.

Working with, and observing, someone in a practical setting provides an ideal opportunity to learn from a well-qualified and experienced coach, someone able to offer advice on a wide range of aspects of coach performance.

A mentor who is able to observe the candidate coaching and offer regular feedback and guidance can be invaluable.

Part of this process should involve the candidate giving serious consideration to the quality of their own performances by evaluating their own sessions and noting ways in which the quality of their input might have been further improved; self-reflection can be a powerful learning tool.

Indeed, self-reflection for personal improvement is one of the assessment criteria for candidates seeking to be assessed in the top band.

Kidman and Hanrahan (2011), argue that self-reflection provides a non-threatening way of evaluating the quality of coaching, and that it aids the process of assessing how effective a coach is in improving athlete performance. Coaches should also be encouraged to observe coaching in other sports.

Increasingly at elite level, ideas are shared across sports to enable best practice, for example in sports science and technology, to be adopted or adapted and then integrated into other sports.

As well as working alongside higher level coaches, candidates can use recordings of themselves coaching as part of their self-analysis (Kidman and Hanrahan 2011). With smart phone technology it is straight forward to get a friend or fellow student to video the coach in action, which can then provide evidence of the quality of coaching for candidates to review and critique.

It is important to remember to get the necessary permissions before videoing anything.

Some moderators reported seeing a number of candidates who organised enjoyable and worthwhile practices and followed this up with frequent encouraging comments to those participating, but rarely offered guidance to enable the quality of performance to improve.

To achieve high marks, coaches need to plan structured activities with a clear aim, demonstrate effective communication skills and provide feedback and guidance that is targeted to enable the athletes to enhance performance levels.

Finally, it is important to remember that becoming a better, or even a great coach, is a dynamic process and is a journey that never stops.

*Frost J (2009), The Sport Journal. ISSN: 1543-9518, Vol 20
Kidman and Hanrahan (2011), The Coaching Process, Routledge*

Heart Rate Monitors and GPS in Sports

Alex Armitstead explores the use of GPS technology to support pre-season training.



Alex is a second-year journalism student at Leeds Beckett University and member of the university rugby squad.

Renowned for being one of the best universities in the country for rugby union and competing at the highest level, Leeds Beckett has decided to take advantage of modern technology and use heart rate monitors, alongside GPS, for the rugby pre-season.

Coming back from the long university summer break, one of the key things that needs to be kept high during the pre-season period is motivation.

With a solid two months of fitness in the peak of summer, athletes need to see results to keep themselves motivated.

This extrinsic feedback was posted and sent to our phones and, depending on what your results were, they could have been positive or negative.

Giving me this extra knowledge about my performance helped me identify areas I needed to improve.

	Tot Dur	Tot Dist (m)	Meterage Per Minute	Max Vel (m/s)	RHIE Tot Bouts	Mean HR	Max HR
Alex Ainstead	00:48:48	★ 5620	115.13	7.28	14	163	199
Average	00:46:06	5096	110.15	7.05	10	166	193

Leeds Beckett used over £60,000 worth of equipment to keep its players on top of their game during this period. Being one of these athletes, seeing my results pushed me to constantly try and improve my game and fitness levels.

Following a morning of sprint training and small sided fitness games, the results from the GPS and heart rate monitors, that were strapped to us, were posted for everyone to see.

SESSION SUMMARY						
Tot Dur	Tot Dist (m)	Meterage Per Minute	Max Vel (m/s)	RHIE Tot Bouts	Mean HR	Max HR
00:48:48	★ 5620	115.13	7.28	14	163	199
00:48:48	★ 5587	114.46	7.36	4	168	180
00:48:48	★ 5863	120.12	7.26	11	171	187
00:28:34	2913	101.96	7.03	10	167	195
00:48:48	★ 6042	123.79	6.82	8	161	217
00:48:48	★ 5653	115.81	6.58	12	162	217
00:48:48	4679	95.86	★ 8.06	12	164	209
00:48:48	★ 5524	113.16	★ 8.44	18	156	187
00:44:44	4706	105.19	6.58	11	177	193
00:48:48	4982	102.07	6.82	2	152	172
00:48:48	5222	106.98	6.77	7	181	195
00:28:34	3002	105.05	6.71	4	159	175
00:48:48	5417	110.98	7.11	11	163	195
00:48:48	5385	110.32	7.24	14	170	189
00:44:36	4583	102.72	6.30	6	181	199
00:48:48	5277	108.11	5.94	5	167	193
00:48:48	5422	111.07	6.74	21	179	199
00:48:48	★ 5850	119.85	★ 7.78	12	151	178
00:46:06	5096	110.15	7.05	10	166	193

Stats such as metres covered, top sprint speed and top heart rate really kept motivation high, and competition between players to get the top scores became a huge part of each day.

Players became highly self-motivated and put in extra time to try to improve their results. I found myself wanting to achieve and pushed through the pain barrier, setting myself more and more challenging goals each session.

The monitors were constantly feeding results into a laptop, and we were told our current results during breaks between the games.

This concurrent feedback really pushed us to

work harder as knowing how many metres you had covered and how many you could go for was constantly on your mind.

A mention must be made to a close friend of mine who was nicknamed “The Human Heart Attack” after topping the heart rate levels almost every day.

In the small sided fitness games, there was “no hiding place” as everyone’s results were published in the form of terminal feedback.

None of the players lacked effort because everyone’s effort was measured and we all felt like we were part of the process.



Tackling essay questions in Component 2

Principal Moderator **Colin Maskery** continues his series of articles on points to build successful 'Extended Responses' – the 15 mark questions!

Last summer's paper produced a range of responses to the four 15 mark questions that form 60% of the paper.

Although many candidates welcome the opportunity of exploring topics at length, others are more hesitant. To help centres prepare candidates for the 2019 exam, the following points, based on the 2018 examination series, may be helpful.

Candidates should be aware that 15 mark questions have five levels of marking based on one of five command words:

- **Compare**
- **Discuss**
- **Evaluate**
- **Analyse**
- **Suggest.**

By way of illustration, the assessment criteria for the highest marks (13-15) for a question with **discuss** as the command word requires candidates to demonstrate the following:

- **Excellent knowledge and understanding** of factors that underpin performance and involvement in physical activity and sport. Communicated in a **coherent writing structure** with clarity and precision
- **Sophisticated analysis** of the factors that underpin performance and involvement in physical activity and sport
- Analysis to make a **fully informed judgement** and support this *with examples*.

As candidates aspire to achieve the best marks possible in the extended answer questions they are encouraged to consider the following points:

- Good all round knowledge of topics is important for writing the extended answer and will always be a major factor in determining marks. Although there were some excellent responses last year a number of candidates did not demonstrate sufficient depth of knowledge and included only limited 'straight forward' information in their opening paragraph; thorough revision to ensure a secure knowledge of key topics is vital.
- Extended responses require a clear structure. A concise introduction is required and should demonstrate an understanding of the context of the question together with definitions of relevant technical terms. Spelling these terms correctly is important.

- The introduction should be followed by paragraphs that focus on a single important point which link back to the title. If a timeline is relevant candidates should be encouraged to begin at the furthest point back in time and then write in a chronological order to the present day.
- The extended answers require analysis of the topic area together with an informed judgement. The analysis emerges from the exploration of key points with the inclusion of some judgements, which can be described as the 'body of the text'. The informed judgement may also be evidenced in a conclusion – which is likely to be longer than the introduction. Many conclusions last summer were too short and often contained no analysis or informed judgement.

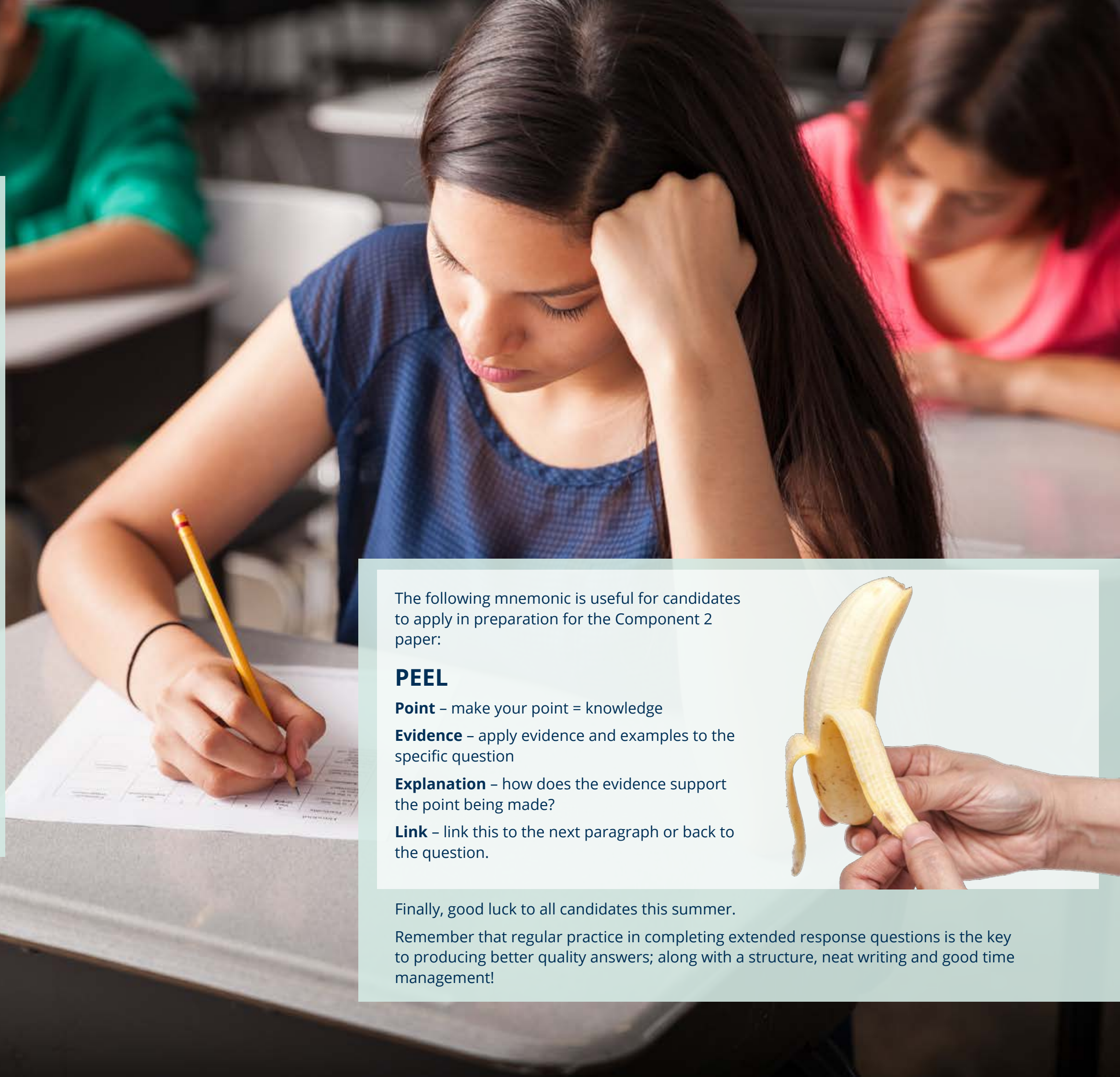
- Candidates should try to avoid providing overly lengthy sports examples which can take up too much writing time and can be too anecdotal in nature while lacking the objectivity to support analytical comments.

However, candidates should not be afraid to give a personal opinion based on the objective information contained in the response, although this can often be best saved for the conclusion, so as to demonstrate sophisticated analysis in support of a fully informed judgement.

- It is important for the answer to include factually accurate detail and candidates should write in extended prose rather than using bullet points.

Answers should also be balanced and focus on answering the question posed; a short plan can help candidates focus their responses.

- Candidates should also be encouraged to practice hand writing answers in line with the time frame of the formal examination so as to help ensure legibility in the formal exam.



The following mnemonic is useful for candidates to apply in preparation for the Component 2 paper:

PEEL

Point – make your point = knowledge

Evidence – apply evidence and examples to the specific question

Explanation – how does the evidence support the point being made?

Link – link this to the next paragraph or back to the question.



Finally, good luck to all candidates this summer.

Remember that regular practice in completing extended response questions is the key to producing better quality answers; along with a structure, neat writing and good time management!



Performance in humidity

Principal Moderator Ellie Bunston summarises the approaches used by athletes to prepare for performance in humid conditions.

As sporting events continue to be hosted in more regions around the world, athletes need to train for optimum performance in humidity, with many seeking to do this by training in humid conditions for a period of time before the competition. This can also be achieved in an acclimatisation chamber.

Athletes will often arrive at venues early and will certainly taper their training to facilitate this.

Higher intensity training can be phased in so that athletes are more used to the humidity and higher intensity sessions being completed in the evening or early in the mornings.

Athletes may attend a holding camp before a competition in a humid environment with training sessions, and warm ups being modified to accommodate the impact of the humidity.

Fluid replacement is essential in these conditions, so an appropriate hydration strategy is essential.

Pre-cooling where the body temperature is reduced before competition is also sometimes used, as are ice baths before competition.

Events taking place in humid conditions are likely to impact on the body with rises in core temperature and heart rate.

Athletes manage this aspect of performance differently and so will have a personal strategy to deal with this.

Failing to train and prepare for performance in humid conditions can cause fatigue and slower pacing. Pre-cooling will reduce lactate accumulation and thermoregulatory strain.

Portable cooling tubs are also an option, and cold mist and cold showers are often more practical than cold tubs and cold air treatments.

Cold garments such as ice vests and ice collars are also a good method of preparing. Ice slurry drinks are also a practical inexpensive method!

Constructing an effective Review and Evaluation for the PDP

Principal Moderator Dane Smith offers advice on how to construct a high quality evaluation to conclude the work.

Last series, candidates generally described, rather than evaluated, the progress they had made in their PDP's based on their fitness levels. Therefore, some candidates did not give an overall picture of how the PDP improved their performance.

In order to construct the Review and Evaluation section, candidates could consider analysing possible adaptations that could have occurred as a result of potential fitness gains; the impact of the PDP on sporting performance; and recommendations for future development. These points could be used as sub-headings within the review and evaluation section as outlined below:

1. Analysis of Fitness

It is important that candidates tabulate and illustrate in chart/graph format their fitness testing results.

It is recommended that pre-, during and post- testing is conducted and documented, and is compared to elite data that allows candidates to gauge an understanding of the requirements to perform at that level.

Candidates should have had a specific level or percentage increase that they wanted to achieve, and this should be reflected on.

2. Possible Adaptations

This section allows candidates to link some of their findings to the information from what they have learnt from Paper 1.

Candidates who have selected aerobic endurance as a focus for the PDP, for example, should have monitored their resting heart rate (RHR), recovery heart rate and maximum heart rate values throughout the 8-10 week training period.

Questions candidates could consider include:

- What are the possible reasons for my RHR decreasing?
- Why has my recovery rate decreased?
- Explain why I have covered more distance, but at a lower max. HR?

Any conclusions made need to be carefully worded and referenced accordingly.



3. Impact of the PDP on Performance

This aspect of the evaluation was missing from many PDPs last series and needs closer attention.

It is all well and good improving on your fitness levels, but if it has no impact on performance then there must be further points for discussion.

Qualitative analysis needs to be supported by quantitative data, and this could be evidenced through the following:

- A notational analysis
- Analysis based on witness statements from a coach(es)
- GPS data (candidates could compare this to elite GPS data)

4. Recommendations for Future Development

This last section is just as important as the previous points, as it gives the candidate time to reflect on their PDP and to consider the following:

- Have the principles of training been applied properly? Could the intensity levels used in training be manipulated further to enhance progress?
- Should periodisation have been used?
- Was the method(s) of training appropriate?
- If progress was not in line with the candidates aims, can reasons for this be evidenced?



Top Tips:

1. Ensure candidates reduce the amount of generic comments and that any statements or subjective comments are justified through quantifiable data and/or researched and referenced.
2. Word count - please ensure that all candidates include clear and concise information. It is clearly documented in the specification that the maximum word limit is 3500 (of the candidates own words).

Please note that words included in tables and text boxes that have been written by the candidate, are also included in the overall word count. Quotes, charts, graphs, training logs etc are not included within the 3500 word limit.

Resources Review

Books, websites and technology

Chief examiner **Dennis Tattoo** continues Inside Track's regular review of the latest sports technology, books and websites, which teachers and students might find of interest.

Adidas miCoach

A recent addition to the growing range of analytical tools in sport is the Adidas miCoach system, which is currently being used by a number of rugby teams in Europe, as well as extensively in America in the MLS.

Like other GPS systems, the technology provides information on the running distance and speed of a player, together with information about the height and number of jumps, as well as heart rate.

The miCoach speed cell is small enough to be stitched into playing kit or boots.

In turn, the feedback provides data that can help the coaching team to plan future training, substitutions and tactics.



Commonwealth Games Federation Official Website



Topic 5.2.4 asks candidates to have knowledge and understanding of the ideals, context and impact of international sporting competitions, like the Olympic and Commonwealth Games.

The official site of the **Commonwealth Games Federation** is an excellent resource for this

topic, providing a wealth of information about major events, the history of the games and the significance of the federation in the twenty first century.

The site summarises the importance of the games and the role they play in providing opportunities for connections and friendships, which bring together a third of the world's population from over 70 nations.

It argues that for over 80 years the federation 'has taken a global leadership role in uniting the Commonwealth's athletes, citizens and communities through the transformative and connecting power of sport'.

The site is easy to navigate, has a wealth of useful information, and is a valuable resource for teachers and students alike.