Teacher Resource Bank

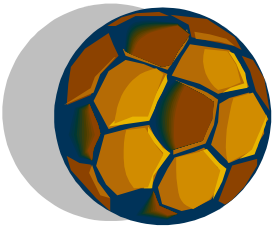
GCE Physical Education

PHED4: Coursework

Sections B&C

PHED 4
PE Coursework
Sections B and C

(For use from academic year 2010-11)



General Guidance for Planning/Structuring PHED4 Sections B and C

Section B

This section is worth **30 marks in total** and is split into **two 15 mark** components.

Component B1 – Identification of weakness in own/another's performance

This process needs to be completed in relation to 3 separate assessment areas, with each marked out of 5, giving a total of 15 marks awarded for the identification of performance weaknesses. These should relate to skills/techniques/tactics applied into fully competitive/performance situations. If you are being assessed as a performer or official you need to critically analyse and evaluate the weaknesses in your own performance. If you are a coach you need to analyse and evaluate the weaknesses of a named individual you are coaching.

In **B1** you therefore need to identify the following**:**

- 2 technical/tactical weaknesses in each assessment area (ie 6 in total)

Component B2 – Comparison to elite performer/official and their "perfect model"

This process needs to be completed in relation to 3 separate assessment areas, with each marked out of 5, giving a total of 15 marks awarded for explaining the correct technical/tactical models of an elite performer/official and applying them into competitive/performance situations.

In **B2** you compare yourself/a named performer to the following depending on the role you are doing:

- if you are doing **performance,** you compare yourself with an **elite performer**
- if you are an **official,** you compare yourself with an **elite official**
- if you are a **coach,** you compare the performance of a person you are coaching with an **elite performer**.

In **B2** you therefore need to identify the following**:**

- 2 elite models in each assessment area (ie 6 in total)

Section C

This section is worth **30 marks in total** and is split into **two 15 mark** components.

Component C1 – Causes of weaknesses/faults

15 marks are awarded for the identification of different causes of weaknesses (5 marks per assessment area). If you are being assessed as a performer or official, you need to identify the causes of the weaknesses in your own performance. If you are a coach, you identify the causes of the weaknesses of an individual you are coaching.

NB It is strongly recommended that students focus on one key theoretical cause when analysing each weakness identified in B1. Eg a lack of explosive power when performing a lay up in a basketball match could be a possible focus to expand on in C1.

Component C2 – Appropriate corrective measures

15 marks are awarded for the identification of appropriate corrective measures for the various weaknesses identified in C1 (5 marks per assessment area).

If you are being assessed as a performer or official, you need to identify corrective measures for your own weaknesses. If you are a coach, you need to identify corrective measures for the weaknesses of an individual you are coaching.

(**NB**: It is strongly recommended that students focus on one detailed theoretical corrective measure which enables them to give the high level of applied relevant information necessary to correct the weakness identified. Eg the issue of explosive power affecting technique could be remedied by plyometrics which could be explained in detail theoretically and then practically applied with information on how to improve performance in as much relevant detail as possible.)

Notes

If you are being assessed as an official, you do not do tactics and strategies in Area of Assessment 3. For an official, this is personal preparation, communication with other officials and maintaining a fair, safe and competitive environment.

When completing this coursework it is sometimes easier to think about the correct technical model **first** and then you will be able to identify your own relative weaknesses from this.

Using tables in each assessment area might help you to **plan** your work. It is not suggested that these should be used in the final piece of work.

Please see the planning tables below for a performer, a coach and an official respectively. Once completed, these will need developing in **detail** to score well in this aspect of the coursework.

Correct technical model/comparison to elite performer	(Attacking) weaknesses via self analysis
	Attacking/Event/Stroke/Skill/Equiv weakness 1
	Attacking/Event/Stroke/Skill/Equiv weakness 2

Correct technical model/comparison to elite performer	(Defensive) weaknesses via self analysis
	Defending/Event/Stroke/Skill/Equiv weakness 1
	Defending/Event/Stroke/Skill/Equiv weakness 2

Correct tactical model/comparison to elite performer	Strategies and tactics via self analysis
	Strategies and tactics weakness 1
	Strategies and tactics weakness 2

Correct technical model/comparison to elite performer	(Attacking) weaknesses of selected performer being coached
	Attacking/Event/Stroke/Skill/Equiv weakness 1
	Attacking/Event/Stroke/Skill/Equiv weakness 2

Correct technical model/comparison to elite performer	(Defensive) weaknesses of selected performer being coached
	Defending/Event/Stroke/Skill/Equiv weakness 1
	Defending/Event/Stroke/Skill/Equiv weakness 2

Correct tactical model/comparison to elite performer	Strategies and tactics – weaknesses of performer being coached
	Strategies and tactics weakness 1
	Strategies and tactics weakness 2

Correct officiating model/comparison to elite official	(Attacking) weaknesses via self analysis as an official
	Attacking/Event/Stroke/Equiv weakness 1
	Attacking/Event/Stroke/Equiv weakness 2

Correct officiating model/comparison to elite official	(Defensive) weaknesses via self analysis as an official
	Defending/Event/Stroke/Equiv weakness 1
	Defending/Event/Stroke/Equiv weakness 2

Correct officiating model/comparison to elite official	Maintaining fair/safe competitive environment/communication with other officials (etc) via self analysis
	Fair play/safety/communication weakness 1
	Fair play/safety/communication weakness 2

Assessment tables/criteria for marking student work

- Mark each of the 2 parts of the work completed in each assessment area separately out of a maximum of 5 marks, each using a blank mark grid such as the one given below.
- Once each part of the work is assessed and given a mark, add both of these together and divide by 2 to give an average for this part of it.
- Add all the different average totals reached for each of the assessment areas in each section with numbers rounded up if 5 or above or down if 4 or below.

Exemplar mark grid

Name: _____

B&C assessment role/activity: _____

Section B

Assessment Area 1

Self analysis			**average =**	
Elite			**average =**	

Assessment Area 2

Self analysis			**average =**	
Elite			**average =**	

Assessment Area 3

Self analysis			**average =**	
Elite			**average =**	

Section B TOTAL:

Section C

Assessment Area 1

Cause			**average =**	
Correction			**average =**	

Assessment Area 2

Cause			**average =**	
Correction			**average =**	

Assessment Area 3

Cause			**average =**	
Correction			**average =**	

Section C TOTAL:

TOTAL for B&C:

Date:

Exemplar mark grid

Name: Stevie G

B&C assessment role/activity: Football performer

Section B

Assessment Area 1

Self analysis	5	4	**average =**	4.5
Elite	3	4	**average =**	3.5

Assessment Area 2

Self analysis	4	4	**average =**	4
Elite	2	3	**average =**	2.5

Assessment Area 3

Self analysis	2	3	**average =**	2.5
Elite	3	3	**average =**	3

Section B TOTAL: 20

Section C

Assessment Area 1

Cause	3	3	**average =**	3
Correction	3	3	**average =**	3

Assessment Area 2

Cause	5	2	**average =**	3.5
Correction	1	0	**average =**	0.5

Assessment Area 3

Cause	2	2	**average =**	2
Correction	4	3	**average =**	3.5

Section C TOTAL: 16 (15.5)

TOTAL for B&C: 36

Date:

Assessment criteria

B1 - Self analysis of skills/techniques

1 = very limited technical detail/very few relevant technical points made when reviewing their own weaknesses (weaknesses of a named performer if they are coaching).

2 = limited technical detail/limited number of technical points made in reviewing their own weaknesses (weaknesses of a named performer if they are coaching).

3 = sound/satisfactory technical analysis of weaknesses/use of technical language mainly linked to skills in isolation.

4 = good/high level of technical detail, technical language evident when self analysing their weaknesses , including clear and appropriate reference to their own competitive/performance situation (equiv for coach).

5 = excellent/very high level of technical detail, technical language evident when self analysing their weaknesses and how they impact on performance, including very clear and highly appropriate reference to their own competitive/performance situation (equiv for coach).

B2 - Elite comparison to perfect model (of performing or officiating as appropriate)

1 = very limited technical detail/very few relevant technical points made in relation to perfect model; very little, if any, use of technical language.

2 = limited technical language/detail/limited number of technical points made in relation to perfect model.

3 = sound/satisfactory technical language/analysis mainly linked to skills in isolation when analysing the perfect model.

4 = good/high level of technical language/detail evident, including clear and appropriate reference to the competitive/performance situation of an elite “performer”/equiv.

5 = excellent/very high level of technical language/detail evident including very clear and highly appropriate reference to the competitive/performance situation of an elite performer/equiv.

NB: no named elite comparison = no marks in B2; for levels higher than “sound”, the skills/techniques **must** be applied into relevant competitive/performance situations.

C1 - Identification and explanation of one major theoretical cause for each of the technical deficiencies identified in B1

1 = very limited relevant theoretical explanation of causes of weaknesses with very little linkage evident to the weaknesses identified in Section B.

2 = limited relevant theoretical explanation of causes of weaknesses with little linkage evident to the weaknesses identified in Section B.

3 = sound/satisfactory relevant theoretical explanation of causes of weaknesses with "some degree" of linkage evident to the weaknesses identified in Section B.

4 = good/high degree of relevant theoretical explanation of causes of weaknesses with a high degree of linkage evident to the weaknesses identified in Section B.

5 = excellent/very high degree of relevant theoretical explanation of causes of weaknesses with a very high degree of linkage evident to the weaknesses identified in Section B.

NB: when completing the 6 causes necessary to cover Assessment Areas 1, 2 and 3, students must include **at least** one theoretical aspect from AS studies in PHED 1/PHED2 and **one** from A level studies in PHED 3. The other 4 can be completed as relevant to weaknesses identified from any other sections of the theory contained in the syllabus. The 6 different causes must be linked to 6 different aspects of the syllabus and repetition will result in no/minimal mark awards!

C2 - Corrective measures for each of the theoretical causes identified in C1

1 = very limited applied theory relevant to solve weaknesses identified in C1; very little, if any, clear link between cause and corrective measures.

2 = limited/little applied theory relevant to solve weaknesses identified in C1; little evidence of clear links between cause and corrective measures.

3 = sound/satisfactory degree of applied theory relevant to solve weaknesses identified in C1; some evidence of links between cause and corrective measures.

4 = good/high degree of applied theory relevant to solve weaknesses identified in C1; good clear link evident between cause and corrective measures.

5 = excellent/very high level of applied theory relevant to solve weaknesses in C1; very good links between cause and corrective measures.

NB: when completing the 6 corrective measures necessary to cover Assessment Areas 1, 2 and 3, students must include **at least** one theoretical aspect from AS studies in PHED 1/PHED2 and **one** from A level studies in PHED 3. The other 4 can be completed as relevant to causes of weaknesses identified from any other sections of the theory contained in the syllabus. The 6 different corrective measures must be linked to 6 different aspects of the syllabus and repetition will result in no/minimal mark awards!

Performer

Exemplar Material Linked to Assessment Criteria

Netball (Category 1) Performer Exemplar

B2 - Correct technical model of elite performer	B1- Self analysis of attacking weakness 1- chest pass
Karen Atkinson always seems to perform hard flat chest passes that have little chance of interception and unlike me, does not lose her accuracy towards the end of a match. Her precise technique through the preparation and execution phases ensures few errors are made. **Preparation:** In the preparation phase she adopts a right hand dominant chest pass, with her right hand slightly behind the ball with her fingers spread. The ball is kept at chest height and both elbows are bent and low. Her knees are also bent with her weight more on the balls of the feet. Karen's body is always open to the direction in which she wishes to pass and this ensures her passes are always fast and flat. By keeping her body open she is able to release the ball quickly. **Execution:** In the execution phase Karen transfers her weight forward extending the knees with an open body. She also extends and follows through with arms and wrists while at the same time the fingers are extended towards the receiver. The elbows are kept close to the body. **Result:** The pass Karen executes travels with a low, flat, hard trajectory which is very difficult to intercept!	**Preparation:** The accuracy of my chest pass deteriorates as I start to get tired towards the end of the game. This occurs due to errors in my technique during the **preparation** phase. Tiredness results in me starting to pass the ball across my body because my feet are in the incorrect position after I have landed. If I am on the left hand side of the court and passing towards the right, ideally I should have landed on my right foot followed by my left. This results in me opening my body to the receiver and allows me to apply more power onto the ball keeping the flight path flat and the speed high. Landing left/right results in me **closing my body to my team-mate** and means the pass I make lacks power and is more easily intercepted. In addition, closing my body to the direction of the pass means I have to **pivot** to get into a more balanced position and this **wastes time** and allows my opponent to mark the ball more effectively. My college coach noticed this closed position affecting my ability to move the ball on quickly and efficiently on a few occasions in a recent match when a number of my chest passes were intercepted against Netball Super College All Stars. **Execution:** During the execution of the chest pass I have a tendency to **push the ball with my elbows out to the side** when they should be behind the ball and this affects the power I apply on the ball and therefore its speed. My passes need to travel quicker in the higher level matches I am now playing in. In certain competitive situations such as local adult league games, the height of my opponent also affects my accuracy during the execution phase. My lack of height is an issue when my pass is marked by a tall opponent. When I am not in a position to pass quickly, I lose the opportunity to transfer my weight forward as my tall opponent is already in position. This means that I apply less power to the ball/it is more easily blocked/intercepted. **Result:** Closing my body to the pass and not being able to transfer my weight forward because I either have to pivot which delays time or am against a tall opponent means that I apply less power to the ball and this affect the trajectory of my pass. It is slower and travels too much on a "loop" making it easier to intercept

Netball (Category 1) Performer Commentary

Section B1

Part 1 – Self analysis of weaknesses in relation to perfect technical model of elite performer

- Candidate shows a good level of awareness of weaknesses in relation to the technical model of a chest pass applied to competitive game situations (eg college/local league matches, tiredness towards the end of a game), applying these weaknesses into 3 distinct phases of preparation, execution and result.
- Candidate is able to highlight prominent technical errors which negatively affect their performance, illustrating a high level of self analysis of this weakness (eg preparation phase - pass ball across body/feet in the wrong position on landing/explaining how the landing in a closed body position is ineffective and contributes to a lack of power in the pass).
- Candidate uses technical language correctly to a good standard (eg pivot/transfer of weight/closed body position, etc).
- Overall a high level of detail is given in relation to the technical model of a chest pass related to different phases and linked back to them. It also makes reference to competitive match situations when self analysing weaknesses. **(High - 4 marks)**

Section B2

Part 2 – Correct technical model of an elite performer

- Candidate's work is a succinct example of a candidate soundly identifying an elite performer to compare against, relevant in relation to the technique they are analysing.
- In considering the elite performer, the work contains a number of relevant technical points which illustrate a sound level of understanding of the perfect technical model to aspire to.

  Preparation
  1. Right hand dominant chest pass with her right hand slightly behind the ball with her fingers spread.
  2. Ball is kept at chest height and both elbows are bent and low.
  3. Her knees are also bent with her weight more on the balls of her feet.
  4. Her body is always open to the direction in which she wishes to pass. By keeping her body open, the effect is a quick release of the ball.

  Execution
  1. Transfers weight forward extending the knees with an open body.
  2. Extends and follows through with arms and wrists and simultaneous finger extensions towards the receiver.

- The work uses appropriate and correct technical language in the elite performer comparison (eg trajectory/weight transfer/open/closed body positions).
- This elite performer comparison section of the work is of a sound level of detail in relation to the perfect technical model of a named elite performer with a number of relevant points made in a clear/structured manner. It does not apply and develop these points into an actual competitive match situation and would need to do so to access higher marks (as well as increasing technical detail!). **(Sound - 3 marks)**

Swimming (Category 2) Performer Exemplar

Section B1

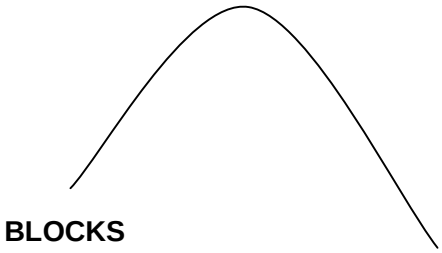
Area of Assessment 1
First Stroke: Butterfly
First Weakness: Start

In a butterfly race such as at the County Championships this year in April, my start is often much slower than my opponents. The start is the fastest part of the race and so my slow start means that I need to try to build my speed up quickly when getting into my stroke action. A slow start often puts me at a disadvantage in high level races as I regularly have to make up lost ground.

From a technical perspective, the physical movement I perform after hearing the starting signal before a race is slow and the time lost here before I even start my strokes can cost me a medal in a sprint race such as the 50 m butterfly County Championships this year. As I push off the blocks I do not gain the maximum power that I should as I tend to stand tall on the blocks, meaning my knees are not as flexed as they could be, meaning that less power can be generated from their extension. This causes a slower speed of flight and entry and so again gives my opponents an advantage as they often enter the water with more propulsion than I do. I then must try and make up this speed on my swim.

On occasions in my butterfly race start I often have my weight relatively far back on the blocks. This causes a slower time to entry as I must move my weight to the centre and then forwards so that I move off the blocks in a more advantageous/balanced position ready to push off from the blocks more powerfully.

My flight path through the air after I leave the blocks is also inconsistent in races. Often I dive too high and not out far enough so that my flight path may look like this:



This is inefficient as I lose time and speed from the increased height in the air. This is because the power I generate from the blocks goes into gaining height rather than distance and because the air resistance during the upwards phase slows me down. This flight also causes me to obtain a deeper entry angle, losing further speed as the energy in my underwater phase is used for ascending to the surface rather than for a forwards movement. As I push from the blocks, I tend to apply pressure straight down into the blocks, gaining a reaction force upwards.

As I enter the water my elbows are sometimes slightly flexed and my head is between my arms. These cause my head and elbows to be further from the centre line of my body, disrupting my body position, causing a loss of streamlining and so an increase in water resistance.

The butterfly kicks I perform in my underwater stage are too similar to those used in the stroke. I tend to perform deep hip movements and although they create more power than the smaller kicks I should use, they greatly disrupt my streamlined body position. The kicks cause an undulation of my upper body and movement of my head which are unnecessary movements causing resistance to my

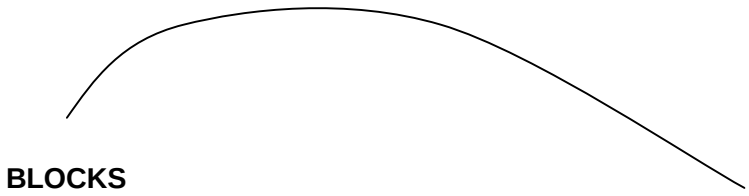
forwards motion. This for many butterfly swimmers is the fastest part of the race however I lose a considerable amount of the propulsion generated from the blocks during this phase.

As my underwater phase is inefficient I shorten it, surfacing earlier than most of my opponents and so I have to then swim a greater distance, this requires more effort. The pull out stroke also ends up deeper from early surfacing and so is more tiring. Furthermore the disruption of my streamlining means I make less use of the speed generated from the wall and therefore must make this up in my swim. In lower level races such as school/area championships this is not as much of an issue as it is at County level and above where times are much faster and the margins between success and failure are much closer.

Section B2

Elite performer perfect technical model: Stephen Parry

Elite level butterfly swimmers such as Olympic bronze medalist Stephen Parry make much better use of the start. This was evident when Stephen swam at National and international events culminating in his bronze medal at the Athens Olympics in 2004. His well developed reaction time is followed by a fast and strong extension of his hips and knees as he pushes off the blocks. His response is quick and powerful as he locates his centre of gravity forward on the blocks and equally for both legs. Just after the push his body position is nearly horizontal causing a much lower flight path which achieves greater distance from the start and a shallower entry:



During flight his arms are extended behind his head with his chin on his chest. This creates a streamlined body position with all his body parts as close to the centre line of his body as possible. He maintains his hips in a high position with his legs extended and enters the water fingers first. This causes the minimum resistance to the forwards motion gained from the blocks.

His comparatively smaller but extremely quick kicks which start from his hips underwater maintain his body position in line with his head and prevent his upper body from moving. This minimises the water resistance against him, allowing him to gain maximum benefit from the propulsion gained at the start and maintain a fast pace underwater, up to the allowed limit of 15 m. He increases the amplitude of his undulations only as he is preparing to resurface, this aids a smooth pull-out transition into the stroke and means a highly efficient and effective race start as evident in the Olympic final.

Swimming (Category 2) Performer Commentary

Section B1

Area of Assessment 1
First Stroke: Butterfly
First Weakness: Start

- Identifies the start as a key weakness in the butterfly stroke they are analysing in stroke 1 and relates performance to competitive situations (eg County Championships).
- Identifies that the physical movement is slow (they also link this to the affect on the outcome of the race). The reason why this is the case is as follows:
- A good/high level of analysis is evident in 3 clear parts – the push off from the blocks; the flight path in the air; and entry into the water.
- Technical analysis is evident to an excellent level - stands tall on the blocks with knees 'not flexed' (the candidate links this to the affect on outcome - less power generated from extension).
- Identifies weight 'relatively far back' on blocks in track start (How far back?). Then links this to the need to move weight forward and increase time taken to complete the dive.
- Identifies that the push is down into the blocks (excellent link to flight path created as a result and illustrated drawing) and link to loss of time/speed.
- Good link that deep entry angle requires more propulsion from the underwater stage to surface.
- Identifies elbows flexed and head between arms - links this to a loss of streamlining/increase in water resistance.
- Identifies similarity of underwater kick to normal stroke kick and the consequences of this - ie early rise.
- The analysis also includes what this kicking action and its result causes to happen from then on, ie loss of position in race/ 'tiring pull out stroke'.
- Use of technical language is relevant and illustrates a high level of understanding of relevant terminology (eg propulsion; streamlined; pull out stroke etc).

The analysis covers in a high level of detail the weaknesses and effects of these weaknesses on the blocks - the push off, the flight path, the underwater stage and the 'pull out' stroke.

It is a very detailed technical analysis with clear links of faults to effects. The work also demonstrates how the candidate is affected in the fully competitive context. **(Very high – 5 marks)**

Section B2

Comparison to elite performer: Stephen Parry

A detailed analysis of the elite performer's technique in the same phases as identified above.

- Identifies strong extension of hips and knees as he drives from the blocks.
- Identifies location of centre of gravity, horizontal position in the air and flight path produced (causes weight to push off evenly on both sides of body).
- Identifies arms extended behind head, chin on chest (etc) (causes swimmer to maintain streamlined position).
- Identifies hips high, legs extended, fingers enter water first (causes minimum resistance).
- Identifies small, sharp leg kicks (causes his body position to remain inline with his head and prevent his upper body from moving. This minimises the water resistance against him, allowing him to gain maximum benefit from the propulsion gained at the start and maintain a fast pace underwater up to the allowed limit of 15 m).
- Uses technical language appropriately and to a high level (eg extension of the hips; centre of gravity; horizontal flight path; streamlined body position etc).

A good detailed technical analysis of the elite performer.

To access very high achievement, the candidate needs to increase the detail in relation to fully competitive situations. **(High – 4 marks)**

Trampoline (Category 3) Performer Exemplar

Section B1

Weakness self analysis: Tucked back somersault

When performing a tucked back somersault as part of my ten bounce routine in inter-college competitions, I often do not manage to create the correct amount of rotation and generally under-rotate, meaning that I do not always safely land for the next move. The tucked back somersault is perhaps the least powerful of the various types I do in my competitive routine.

On occasions (eg in BCS competitions last year) my coach noticed that I apply far too little 'off centre' force and I tend to be seriously short of rotation. The most important aspect of a back somersault is the take off, with my hips forwards and shoulders slightly backward so that my whole body is balanced over my feet.

My coach regularly asks me in training, and then in competitions, to push my belly button to the roof on take off. However, having to tuck during this move, I regularly tuck too late causing me to pick the knees up fast, and bend backwards to try to force the rotation to happen. I am able to throw my upper body backward and downward as my hips push forwards and upward but I simply do this too late.

When my hips are extended (straight somersault) my rotation is slow but controlled. However I am over confident when rotating in a straight back somersault causing me to then panic at a late moment and tuck far too late in the move. As a result I often land on my chest. Being aware that I must land the move safely, I concentrate on securing a safe landing on the bed when coming down to land. However, this landing is not necessarily on my feet as I have not rotated enough. I actually seem to be happy just to land on my front (chest) rather than rotating earlier and securing a safe landing on my feet.

Section B2

Perfect model of elite performer: GB trampolinist Steven Williams

In comparison to my own technical faults, GB Trampoline member Steven Williams shows near technical perfection when performing this move in the National Championships. During his take off, Steven's hips are forwards and his shoulders are slightly backwards so that his whole body is balanced over his feet.

Steven does not tuck too soon or too late (like me). As he performs a tucked back somersault in high level national competitions, Steven's abdominal area is high towards the ceiling and he holds an extended position of the hips before a smooth transition into the tucked position which appears to accelerate his rotation.

Of course, tucking equally requires un-tucking and Steven appears to have an uncanny ability to see the bed early (difficult in a tucked back somersault) and extends his hips at the precise moment allowing him to hit the bed with control and on the cross, landing on his feet. The major comparison to myself is that, even in highly stressful major competitions, he times his tuck and un-tuck to increase the speed of rotation to just enough to land perfectly after a full revolution.

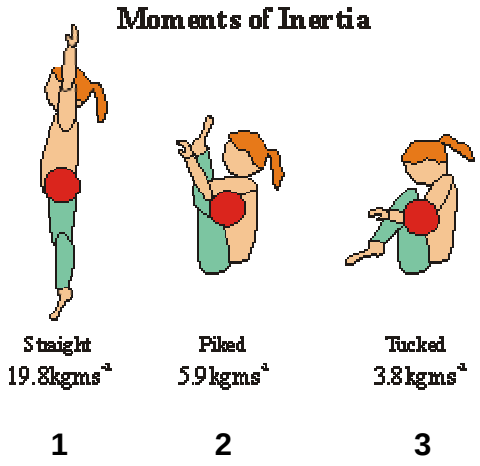
Steven shows a definitive phase whereby he pushes his hips forward and upward at a much earlier part of the move than I do. Hence Steven is far more effective and consistent when performing a tucked back somersault as part of his competitive routine.

Section C1

Theoretical reason/cause

In order to explain my under rotation in my tucked back somersault I will refer to the conservation of angular momentum. My main issue is that I tuck too late and according to this theoretical part of the course, I can explain this by the large moment of inertia I possess when I start my somersault.

Moment of inertia (or the proximity of body parts to the axis of rotation) is directly related to angular velocity (the velocity of rotation around the axis). They are inversely proportional and explain why angular momentum (angular velocity x moment of inertia) remains constant in a move such as this. As my moment of inertia is high at the start of my somersault (extended hips as shown in picture 1 below), the inversely proportional angular velocity is therefore low. When I finally tuck up and decrease my moment of inertia (as shown in picture 3 below); my angular velocity does increase (creating more torque) but not to the extent that I rotate over on to my feet. Torque is more commonly known as turning force.



Section C2

Corrective measure

The basic corrective measure I need to undertake is to start my tuck earlier in the move. By adopting a position like number 3 above I will be able to create more turning force (torque) and rotate enough to land on my feet. By adopting a more tucked position I will have decreased my moment of inertia. As moment of inertia and angular velocity are inversely proportional, the subsequent decrease in my moment of inertia will increase my angular velocity meaning that I will create more torque. By moving my upper body backward and downward as my hips push forwards and upward at a much earlier point in the move than I currently do, the resultant increase in torque will increase my rotational rate and I should have the opportunity to un-tuck (increase my moment of inertia and decrease my angular velocity) so that I can safely land on my feet and carry on my routine successfully.

Trampoline (Category 3) Performer Commentary

Section B1

Own weaknesses: Tucked back somersault

- Candidate gives evidence of a good/high level of awareness of their weaknesses in relation to the technical model of a backward somersault and its inclusion in a competitive routine.
- Candidate is able to highlight prominent errors which negatively affect performance of this skill (eg far too little off centre force which leads to lack of speed in rotation; take off is too late, etc).
- There is evidence of a high level of awareness of own weakness evident in their self analysis.
- Note: the candidate moves away from the identified weakness to discuss a 'straight back somersault'. No marks are awarded for this as it is not relevant. Candidates should stick to their identified weakness. **(High - 4 marks)**

Section B2

Technical model of elite performer: Steven Williams

- A sound comparison is made to the perfect technical model of a named elite performer (to improve they would be expected to expand more; eg body position/use of technical language etc).
- A sound level of technical language is used which illustrates a sound level of awareness of the perfect technical model to aspire to.
- The technical analysis clearly links to key phases such as the take off (eg hips forward), execution (eg in the perfect position to accelerate the rotation), and result (eg a safe/effective landing ensuring smooth continuity of the sequence).
- There is clear evidence of a sound level of awareness of the perfect technical model illustrated in the comparison to an elite performer and competitive situations. **(Sound - 3 marks)**

Section C1

Theoretical reason/cause

- Explanation of causes of weaknesses illustrates a good in depth knowledge of the activity/technique chosen for analysis.
- The work illustrates a good in depth knowledge of relevant theory related well to weaknesses identified in Section B.
- There is clear evidence of appropriate and correct use of technical language. **(High - 4 marks)**

Section C2

Corrective measure

- Corrective measures are stated but not developed/applied. Example of very limited work.
- There is very little evidence of actual links to the causes and no practical application of how the corrective measure would be achieved to bring about the change, eg an explanation and development of a form of practice/mechanical guidance.
- There is evidence of a sound level of technical language used in Section C but the detail contained is far too general in its theoretical application and needs to be personally applied, detailing actual ways to improve the performance weaknesses identified. **(Very limited - 1 mark)**

Coach

Exemplar Material Linked to Achievement Descriptors

Netball (Category 1) Coach Exemplar

B2 - Correct technical model of elite performer	B1- Analysis of performance, attacking weakness 1- chest pass of performer being coached
Karen Atkinson always seems to perform hard flat chest passes that have little chance of interception and unlike me, does not lose her accuracy towards the end of a match. Her precise technique through the preparation and execution phases ensures few errors are made. **Preparation:** In the preparation phase she adopts a right hand dominant chest pass with her right hand slightly behind the ball with her fingers spread. The ball is kept at chest height and both elbows are bent and low. Her knees are also bent with her weight more on the balls of the feet. Karen's body is always open to the direction in which she wishes to pass and this ensures her passes are always fast and flat. By keeping her body open she is able to release the ball quickly. **Execution:** In the execution phase Karen transfers her weight forward extending the knees with an open body. She also extends and follows through with arms and wrists while at the same time the fingers are extended towards the receiver. The elbows are kept close to the body. **Result:** The pass Karen executes travels with a low, flat, hard trajectory which is very difficult to intercept!	**Preparation:** The accuracy of my (chosen performer's) chest pass deteriorates as they start to get tired towards the end of the game. This occurs due to errors in their technique during the **preparation phase**. Tiredness results in them starting to pass the ball across their body because their feet are in the incorrect position after they have landed. If they are on the left hand side of the court and passing towards the right, ideally they should have landed on their right foot followed by their left. This results in them opening their body to the receiver and allows them to apply more power onto the ball keeping the flight path flat and the speed high. Landing left/right results in them closing their body to their team-mate and means the pass they make lacks power and is more easily intercepted. In addition, closing their body to the direction of the pass means they have to pivot to get into a more balanced position and this wastes time and allows their opponent to mark the ball more effectively. Their college coach noticed this closed position affecting their ability to move the ball on quickly and efficiently on a few occasions in a recent match against Netball Super College All Stars. **Execution:** During the execution of the chest pass they have a tendency to push the ball with their elbows out to the side when they should be behind the ball and this affects the power they apply on the ball and therefore its speed. Their passes need to travel quicker. In certain competitive situations such as local adult league games, the height of their opponent also affects their accuracy during the execution phase. Their lack of height is an issue when their pass is marked by a tall opponent. When they are not in a position to pass quickly, they lose the opportunity to transfer their weight forward as their tall opponent is already in position. This means that they apply less power to the ball/it is more easily intercepted. **Result:** Closing their body to the pass and not being able to transfer their weight forward because they either have to pivot which delays time or when against a tall opponent means that they apply less power to the ball and this affect the trajectory of the pass. It is slower and travels too much on a "loop" making it easier to intercept.

Netball (Category 1) Coach Commentary

Section B1

Part 1 – Analysis of weaknesses in performer being coached in relation to perfect technical model of elite performer

- Candidate shows a good level of awareness of weaknesses in relation to the technical model of a chest pass applied into competitive game situations (eg college/local league matches; tiredness towards the end of a game), applying these weaknesses into 3 distinct phases of preparation, execution and result.
- Candidate is able to highlight prominent errors which negatively affect performance illustrating a high level of analysis of the chest pass weaknesses observed whilst coaching (eg preparation phase - pass ball across body/feet in the wrong position on landing/explaining how the landing in a closed body position is ineffective and contributes to a lack of power in the pass).
- Candidate uses technical language correctly to a good standard (eg pivot/transfer of weight/closed body position, etc).
- Overall a high level of detail is given in relation to the technical model of a chest pass related to different phases and linked back to them. It also makes reference to competitive match situations when analysing weaknesses. **(High – 4 marks)**

Section B2

Part 2 – Correct technical model of an elite performer

- Candidate's work is a succinct example of a candidate soundly identifying an elite performer to compare against, relevant in relation to the technique they are analysing.
- In considering the elite performer, the work contains a number of relevant technical points which illustrate a sound level of understanding of the perfect technical model to aspire to.

  Preparation
  1. Right hand dominant chest pass with her right hand slightly behind the ball with her fingers spread.
  2. Ball is kept at chest height and both elbows are bent and low.
  3. Her knees are also bent with her weight more on the balls of her feet.
  4. Her body is always open to the direction in which she wishes to pass. By keeping her body Open, the effect is a quick release of the ball.

  Execution
  1. Transfers weight forward extending the knees with an open body.
  2. Extends and follows through with arms and wrists and simultaneous finger extensions towards the receiver.

- The work uses appropriate and correct technical language in the elite performer comparison (eg trajectory/weight transfer/open/closed body positions).
- This elite performer comparison section of the work is of a sound level of detail in relation to the perfect technical model of a named elite performer with a number of relevant points made in a clear/structured manner. It does not apply and develop these points into an actual competitive match situation and would need to do so to access higher marks. **(Sound – 3 marks)**

Swimming (Category 2) Coach Exemplar

Section B1

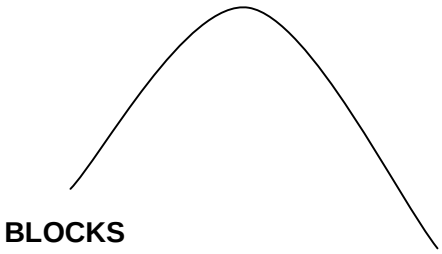
Area of Assessment 1
First Stroke: Butterfly
First Weakness: Start

In a butterfly race such as at the County Championships this year in April, their start is often much slower than their opponents. The start is the fastest part of the race and so their slow start means that they need to try to build their speed up quickly when getting into their stroke action. A slow start often puts them at a disadvantage in races as they regularly have to make up lost ground.

From a technical perspective, the physical movement they perform after hearing the starting signal before a race is slow and the time lost here before they even start their strokes can cost them a medal in a sprint race such as the 50 m butterfly County Championships this year. As they push off the blocks they do not gain the maximum power that they should as they tend to stand tall on the blocks so their knees are not as flexed as they could be, meaning that less power can be generated from their extension. This causes a slower speed of flight and entry and so again gives their opponents an advantage as they often enter the water with more propulsion than they do. They then must try and make up this speed on their swim.

On occasions in their butterfly race start they often have their weight relatively far back on the blocks. This causes a slower time to entry as they must move their weight to the centre and then forwards so that they move off the blocks in a more advantageous/ balanced position ready to push off from the blocks more powerfully.

Their flight path through the air after they leave the blocks is also inconsistent. Often they dive too high and not out far enough so that their flight path may look like this:



This is inefficient as they lose time and speed from the increased height in the air. This is because the power they generate from the blocks goes into gaining height rather than distance and because the air resistance during the upwards phase slows them down. This flight also causes them to obtain a deeper entry angle losing further speed as the energy in their underwater phase is used for ascending to the surface rather than for a forwards movement. As they push from the blocks, they tend to apply pressure straight down into the blocks, gaining a reaction force upwards.

As they enter the water their elbows are sometimes slightly flexed and their head is between their arms. These cause their head and elbows to be further from the centre line of their body, disrupting their body position causing a loss of streamlining and so an increase in water resistance.

The butterfly kicks they perform in their underwater stage are too similar to those used in the stroke. They tend to perform deep hip movements and although they create more power than the smaller kicks they should use, they greatly disrupt their streamlined body position. The kicks cause an

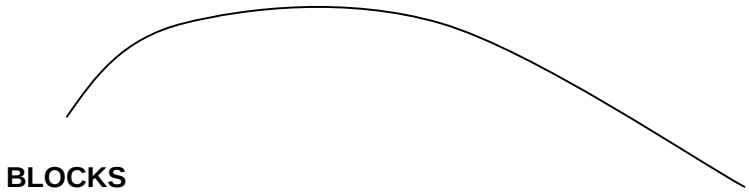
undulation of their upper body and movement of their head which are unnecessary movements causing resistance to their forwards motion. This for many butterfly swimmers is the fastest part of the race however they lose a considerable amount of the propulsion generated from the blocks during this phase.

As their underwater phase is inefficient, they shorten it surfacing earlier than most of their opponents and so they have to then swim a greater distance this requires more effort. The pull out stroke also ends up deeper from early surfacing and so is more tiring. Furthermore the disruption of their streamlining means they make less use of the speed generated from the wall and therefore must make this up in their swim. In lower level races such as school/area championships this is not as much of an issue as it is at County level and above where times are much faster and the margins between success and failure are much closer.

Section B2

Perfect model of elite performer: Stephen Parry

Elite level butterfly swimmers such as Olympic bronze medalist Stephen Parry make much better use of the start. This was evident when Stephen swam at National and international events culminating in his bronze medal at the Athens Olympics in 2004. His well developed reaction time is followed by a fast and strong extension of his hips and knees as he pushes off the blocks. His response is quick and powerful as he locates his centre of gravity forward on the blocks and equally for both legs. Just after the push his body position is nearly horizontal causing a much lower flight path which achieves greater distance from the start and a shallower entry:



During flight his arms are extended behind his head with his chin on his chest. This creates a streamlined body position with all his body parts as close to the centre line of his body as possible. He maintains his hips in a high position with his legs extended and enters the water fingers first. This causes the minimum resistance to the forwards motion gained from the blocks.

His comparatively smaller but extremely quick kicks which start from his hips underwater maintain his body position in line with his head and prevent his upper body from moving. This minimises the water resistance against him, allowing him to gain maximum benefit from the propulsion gained at the start and maintain a fast pace underwater up to the allowed limit of 15 m. He increases the amplitude of his undulations only as he is preparing to resurface, this aids a smooth pull-out transition into the stroke and means a highly efficient and effective race start.

Swimming (Category 2) Coach Commentary

Section B1

Area of Assessment 1
First Stroke: Butterfly
First Weakness: Start

- Identifies the start as a key weakness in the butterfly stroke they are analysing as stroke 1 and relates performance to competitive situations (eg County Championships).
- Identifies that the physical movement is slow (they also link this to the affect on the outcome of the race). The reason why this is the case as follows:
- A good level of analysis is evident in 3 clear parts – the push off from the blocks, the flight path in the air, and entry into the water.
- Technical analysis is evident to an excellent level - stands tall on the blocks with knees 'not flexed' (the candidate links this to the affect on outcome - less power generated from extension).
- Identifies weight 'relatively far back' on blocks in track start (how far back?) then links this to the need to move weight forward and increase time taken to complete the dive.
- Identifies that the push is down into the blocks (excellent link to flight path created as a result and illustrated drawing) and links to loss of time/speed.
- Good link that deep entry angle requires more propulsion from the underwater stage to surface.
- Identifies elbows flexed and head between arms - links this to a loss of streamlining/increase in water resistance.
- Identifies similarity of underwater kick to normal stroke kick and the consequences of this - ie early rise.
- The analysis also includes what this kicking action and its result causes to happen from then on, ie loss of position in race/ 'tiring pull out stroke'.
- Use of technical language is relevant and illustrates a very high level of understanding of relevant terminology (eg propulsion, streamlined, pull out stroke etc).

The analysis covers in a very high level of detail, the weaknesses and effects of these weaknesses on the blocks, the push off, the flight path, the underwater stage and the 'pull out' stroke.

It is a very detailed technical analysis with clear links of faults to effect on result. The work also demonstrates how the performer being coached is affected in the fully competitive context.

(Very high – 5 marks)

Section B2

Perfect model of elite performer: Stephen Parry

A detailed analysis of the elite performer's technique in the same phases as identified above.

- Identifies strong extension of hips and knees as he drives from the blocks.
- Identifies location of centre of gravity, horizontal position in the air and flight path produced (causes weight to pushed off evenly on both sides of body).
- Identifies arms extended behind head, chin on chest (etc) (causes swimmer to maintain streamlined position).
- Identifies hips high, legs extended, fingers enter water first (causes minimum resistance).
- Identifies small, sharp leg kicks (causes his body position to remain in line with his head and prevent his upper body from moving. This minimises the water resistance against him, allowing him to gain maximum benefit from the propulsion gained at the start and maintain a fast pace underwater up to the allowed limit of 15 m).
- Uses technical language appropriately and to a high level (eg extension of the hips, centre of gravity, horizontal flight path, streamlined body position, etc).

A good detailed technical analysis of the elite performer.

To clearly access very high achievement, the candidate needs to increase the link to fully competitive situations. **(High – 4 marks)**

Trampoline (Category 3) Coach Exemplar

Section B1

Weakness performer analysis: Tucked back somersault

When performing a tucked back somersault as part of their ten bounce routine in inter-college competitions, they often do not manage to create the correct amount of rotation and generally under-rotate, meaning that they do not always safely land for the next move.

The tucked back somersault is perhaps the least powerful of the various types they do in their competitive routine. On occasions they apply far too little 'off centre' force and they tend to be seriously short of rotation. The most important aspect of a back somersault is the take off, with their hips forward and shoulders slightly backward so that their whole body is balanced over the feet.

As a coach, I regularly ask them in training, and then in competitions, to push their belly button to the roof on take off. However, having to tuck during this move, they regularly tuck too late causing them to pick the knees up fast, and bend backwards to try to force the rotation to happen. They are able to throw their upper body backward and downward as their hips push forwards and upward but they simply do this too late. When their hips are extended (straight somersault), their rotation is slow but controlled.

However they are over confident when rotating in a straight back somersault causing them to then panic at a late moment and tuck far too late in the move. As a result they often land on their chest. Being aware that they must land the move safely, they concentrate on securing a safe landing on the bed when coming down to land. However, this landing is not necessarily on their feet as they have not rotated enough. They actually seem to be happy just to land on their front (chest) rather than rotating earlier and securing a safe landing on their feet.

Section B2

Perfect model of elite performer: GB trampolinist Steven Williams

In comparison to my own technical faults, GB Trampoline member Steven Williams shows near technical perfection when performing this move in the National Championships. During his take off, Steven's hips are forwards and his shoulders are slightly backwards so that his whole body is balanced over his feet.

Steven does not tuck too soon or too late (like me). As he performs a tucked back somersault in high level national competitions, Steven's abdominal area is high towards the ceiling and he holds an extended position of the hips before a smooth transition into the tucked position which appears to accelerate his rotation.

Of course, tucking equally requires un-tucking and Steven appears to have an uncanny ability to see the bed early (difficult in a tucked back somersault) and extends his hips at the precise moment allowing him to hit the bed with control and on the cross, landing on his feet. The major comparison to myself is that, even in highly stressful major competitions, he times his tuck and un-tuck to increase the speed of rotation to just enough to land perfectly after a full revolution.

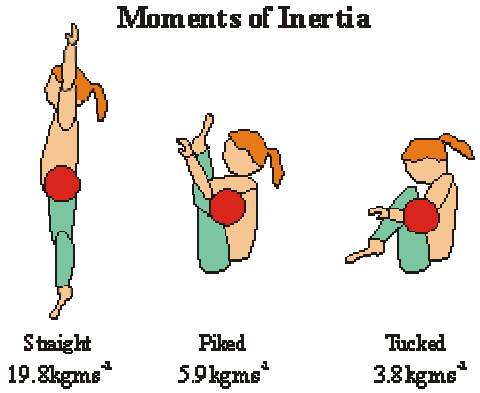
Steven shows a definitive phase whereby he pushes his hips forward and upward at a much earlier part of the move than I do. Hence Steven is far more effective and consistent when performing a tucked back summersault as part of his competitive routine.

Section C1

Theoretical reason/cause

In order to explain my performer's under rotation in their tucked back somersault I will refer to the conservation of angular momentum. My main issue is that they tuck too late and according to this theoretical part of the course, it can be explained by the large moment of inertia they possess when they start their somersault.

Moment of inertia (or the proximity of body parts to the axis of rotation) is directly related to angular velocity (the velocity of rotation around the axis). They are inversely proportional and explain why angular momentum (angular velocity x moment of inertia) remains constant in a move such as this. As their moment of inertia is high at the start of their somersault (extended hips as shown in picture 1 below), the inversely proportional angular velocity is therefore low. When they finally tuck up and decrease their moment of inertia (as shown in picture 3 below) their angular velocity does increase (creating more torque) but not to the extent that they rotate over on to their feet. Torque is more commonly known as turning force.



1 **2** **3**

Section C2

Corrective measure

The basic corrective measure I need to undertake with my performer is to start their tuck earlier in the move. By adopting a position like number 3 above they will be able to create more turning force (torque) and rotate enough to land on their feet. By adopting a more tucked position they will have decreased their moment of inertia. As moment of inertia and angular velocity are inversely proportional, the subsequent decrease in their moment of inertia will increase their angular velocity meaning that they will create more torque. By moving their upper body backward and downward as their hips push forwards and upward at a much earlier point in the move than they currently do, the resultant increase in torque will increase their rotational rate and they should have the opportunity to un-tuck (increase their moment of inertia and decrease their angular velocity) so that they can safely land on their feet and carry on their routine successfully.

Trampoline (Category 3) Performer Commentary

Section B1

Weakness: Tucked back somersault

- Candidate gives evidence of a good/high level of awareness of performer weaknesses in relation to the technical model of a backward somersault and its inclusion in a competitive routine.
- Candidate is able to highlight prominent errors which negatively affect performance of this skill (eg far too little off centre force which leads to lack of speed in rotation; take off is too late, etc).
- There is evidence of a high level of awareness of weaknesses evident in their performer analysis.
- The candidate moves away from the identified weakness to discuss a 'straight back somersault'. No marks are awarded for this as it is not relevant. Candidates should stick to their main identified weakness. **(High - 4 marks)**

Section B2

Perfect model of elite performer: Steven Williams

- A sound comparison is made to the perfect technical model of a named elite performer (to improve they would be expected to expand more eg body position/use of technical language etc).
- A sound level of technical language is used which illustrates a sound level of awareness of the perfect technical model to aspire to.
- The technical analysis clearly links to key phases such as the take off (eg hips forward), execution (eg in the perfect position to accelerate the rotation), and result (eg a safe/effective landing ensuring smooth continuity of the sequence).
- There is clear evidence of a sound level of awareness of the perfect technical model illustrated in the comparison to an elite performer and competitive situations. **(Sound - 3 marks)**

Section C1

Theoretical reason/cause

- Explanation of cause of weaknesses illustrates a good in depth knowledge of the activity/technique chosen for analysis.
- The work illustrates a good in depth knowledge of relevant theory related well to weaknesses identified in Section B.
- There is clear evidence of appropriate and correct use of technical language. **(High - 4 marks)**

Section C2

Corrective measure

- Corrective measures are stated but not developed. Example of very limited work.
- There is very little evidence of actual links to the causes and no practical application of how the corrective measure would be achieved to bring about the change eg explanation and application of a form of practice/mechanical guidance.
- There is evidence of a sound level of technical language used in Section C but the detail contained is too general in its theoretical application and needs to be personally applied, detailing actual ways to improve the performance weaknesses identified. **(Very limited - 1 mark)**

Official

Exemplar Material Linked to Achievement Descriptors

NB: When completing Sections B+C of PHED 4 for the role of an official, it is important that students clearly identify appropriate weaknesses in each assessment area. Clear technical analysis applied into competitive situations of “officiating models” is important to gain marks.

Assessment Area 1= attacking skills/decisions against attackers; event/stroke 1/decisions in event/stroke 1.
In association football - passing/receiving; shooting; attacking header; offside.
In cricket - run out; LBW; caught behind.
In netball - centre pass/over a third/short pass; repossession; footwork; replaying; offside.

Assessment Area 2 = defensive skills/decisions against defenders; event/stroke 2/decisions in event/stroke 2.
In association football - tackling-high/studs up/from behind; intercepting; defensive header.
In cricket - no ball; wide ball; adherence to fielding restrictions in limited over matches.
In netball - contact; obstruction; defending throw in from goal line; rebound vs defender.

Assessment Area 3 = ensuring fair play; health and safety/injury protocols; effective communication with performers/fellow officials eg voice projection/explanation of decisions/use of whistle/hand signals/co-operation between umpires.

Rugby Union (Category 1) Official Exemplar
AA3- Effective Communication

(Communication weakness: Clarity of hand signals when awarding a free kick or a penalty)

Section B1

Own weakness

A definite weakness I have in my Rugby officiating is the lack of clarity with my hand signals. In a recent match I officiated, it was unclear on several occasions whether I was giving a free kick or a penalty for the attackers. As a result the team I awarded the penalty to were often unsure as to what decision to make because a penalty could have been kicked for 3 points. This led to frustration within the players.

My arm was up but not fully extended towards the team the penalty was for and the players did not really understand what I had given as some of them could not hear me. On one occasion the team in possession took a quick free kick and lost possession in the first phase. Had I been a little clearer with my signals, they would have known that it was actually a penalty and may well have kicked for goal.

Section B2

Model of an elite official: David McHugh

International referee David McHugh always gives very clear hand signals. When awarding a penalty his arm is raised fully in the direction of the team who has won the penalty. This is also the case with free kicks. There is no confusion on the field as to what decision is made as everyone understands his hand signals as they are clearly made and are the ones stated in the rule book.

Section C1

Theoretical reason for my weakness

The theoretical reason for my inability to award clear hand signals is due to a lack of self-efficacy. This is a type of confidence - something I do not have much of when refereeing. As I lack confidence, I do not give hand signals with clarity and do not always feel confident that the signal is correct. This is because some of the signals I have given in the past have been questioned and I do not have a great ability to control my arousal levels when giving them. I have not got many signals correct in the past and often get flustered, emotionally excited and worried that I will get them wrong again.

Section C2

Corrective measure for my weakness

To improve my self efficacy and ultimately my hand signals, I need to experience success. To do this I could practice refereeing training matches or set up drills in training that allow me to make penalty or free kick decisions regularly. I could have a referee ‘buddy’ beside me to help and ensure I get it right. I also need to try to use relaxation techniques like deep breathing when giving these signals to control my arousal.

Rugby Union (Category 1) Official Commentary

Section B1

Analysis of Own Weaknesses

- One communication weakness is clearly stated - lack of clarity when using hand signals when awarding a penalty/free kick.
- There is some evidence to explain this weakness using examples from officiating fully competitive situations - penalty/free kick.
- Some limited explanation was given - arm not fully extended towards the team being awarded the decision.
- Some explanation about the affects the weakness has on the situation - confusion of players etc.
- The answer lacks detail on what the weakness is and relevant examples with consequential actions of the official, other officials and the players.
- Consideration of communication in a much wider sense as an aspect of Assessment Area 3 would enable access to higher marks. **(2 marks)**

Section B2

Perfect model of elite official

- The elite official is named.
- One example of communication given is of a hand signal used effectively.
- Very limited explanation of how this hand signal affects others.
- No detail in the answer about various signals used, how they are applied and consequential actions from official, other officials, players. **(1 mark)**

Section C1

Theoretical reason for my weakness

- The theoretical area - self efficacy- is stated but the explanation is limited. It does not mention that this is defined as situation specific confidence.
- There is some reference to two of the four factors of self efficacy - past performance accomplishments and emotional arousal. Although they are not named, the explanation, albeit limited, suggests some limited understanding.
- There is no reference whatsoever to the other factors of self-efficacy - vicarious experience and verbal persuasion. **(2 marks)**

Section C2

Corrective measure for my weakness

- The remedy given is partially correct in that a very limited answer on how to ensure past performance accomplishments and emotional arousal is stated.
- There is no detail in the explanation of how to use deep breathing and how this will reduce/control arousal levels and ultimately improve the clarity of hand signals.
- Some credit can be given for the thinking relating to how to deal with past performance accomplishments and emotional arousal. However, the answer focuses on training situations and does not relate to fully competitive contexts.
- There is no reference whatsoever to the other factors of self-efficacy - vicarious experience and verbal persuasion.
- The answer is very limited in its detail and application of the theory of the course. **(1 mark)**