Analysis and Evaluation

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Key points

Where to find **support resources**

Clarity between **Analysis, Reflection and Evaluation**

Student **examples**

Support resources

Advice and strategies

→

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Analysis and Evaluation

AE1 - Evidence

Analysis and **evaluation** of evidence relating to physical activity.

AE2 - Improvement

Reflection on and **evaluation** of participation and/or performance improvement.

AE3 - Strategies

Evaluation of implemented strategies.

Page 13 Stage 2 Physical Education Subject outline

AE1: **ANALYSIS** AND **EVALUATION** OF EVIDENCE RELATING TO PHYSICAL ACTIVITY.

ANALYSIS

requires a 'break down of evidence to find relationships'

- Break down and identify parts
- Relationship, trends, patterns

EVALUATION

"E-Valu": give Evidence for the VALUE of something

- Judge the value of the evidence based on criteria
  - Implicit – Selection of relevant evidence
  - Explicit – Validity and reliability

EXAMPLE OF AE1 – ANALYSIS & EVALUATION OF EVIDENCE

(Example from AT1)

Example of analysing evidence:

Break down   Relationship

As shown by the highlighted segments in figure 1, player one effectively exploited space using the width of the pitch and a variety of repeated efforts. Represented by the yellow highlight in figure 1 and images displayed in figure 2, the player exploited space off-ball using intervals of explosive and sub-maximal intensities, resulting in a 3 on 1 and space for his team. Furthermore, he continually exploited space explosively in transition from defence to attack by leading into space, receiving the ball on the run and dribbling in between defenders (green highlight and figure 3). Later in the game, this was demonstrated again (orange and blue highlight and figure 4 and 5) when the player covered at a high intensity into defence. This generated space that was exploited on-ball at a maximal intensity down the wing.

Figure 3. Pictures demonstrating the green highlight from figure 1, with player one dodging past opposition defenders.

Figure 2. Series of images from the first half of the 9 v 9 soccer game in Stage 2 PE, illustrating the yellow highlighted section (figure 1) for player one.

Figure 1. Highlighted heat map and legend table for a midfielder (player one) for the first half (18minutes) of a 9 v 9 game of soccer in Stage 2 PE. O indicates off-ball, A indicates on-ball and D indicates defensive.

Description	Time	Duration (seconds)	Type of movement
O	1:34-1:35	1	Jog
O	1:35-1:42	7	Sprint
O	1:42-1:44	2	Jog
O	1:44-1:48	2	Sprint
O	1:46-1:48	2	Jog
O	1:48-1:54	6	Sprint
D	14:17-14:38	21	Slow Jog
A	14:38-14:43	5	Sprint
D	16:32-16:40	8	Slow Jog
D	16:40-16:46	6	Sprint
O	16:46-16:56	10	Fast Jog
A	16:56-17:03	7	Fast Jog
O	17:03-17:07	4	Sprint

EXAMPLE OF AE1 – ANALYSIS & EVALUATION OF EVIDENCE

(Example from AT3 Script – evidence was displayed on screen)

Round 3 saw us once again increase our successful shots from an average of 2.5 to 4, as well as decrease our shots taken from 20.5 per game to 19. This highlights improvement in shooting efficiency, rising from 12.5% to 21%, as well as perceptual attunement and perception-action coupling from reducing the total number of shots taken and instead choosing only the best possibilities . This was also evident in the general shooting data where we shot much closer to the ring and rarely from far away, affording us greater opportunity to score. Despite this, the successful outcomes of both penalty passes and penalty shots had both dropped, however this was due to not receiving the initial opportunity and therefore having less ability to be able to exploit these chances, showing that sometimes the statistical data does not fully reflect the situation.

By averaging the data from these two games of round 3, it hasn't accurately represented our team's true improvement. This is because we scored 6 shots and had our first ever victory in game 1 showing immense improvement, compared to only scoring 2 shots and losing heavily in game 2, highlighting a lack or even decrease in improvement. Therefore, by averaging the two, it was not an accurate representation of the day. Consequently, whilst we experienced significant overall team improvement from a tactical shooting perspective in our first game, a range of external factors not previously accounted for such as psychological, motivational, physiological influences etc. have played roles in decreasing our performance by the second game, highlighting that averaging the competition was not valid evidence for understanding the level of improvement achieved.

Break down

Relationship

Criteria

Value judgement

Evidence to support

AE2:   **REFLECTION** ON AND **EVALUATION** OF PARTICIPATION AND/OR PERFORMANCE IMPROVEMENT.

REFLECTION

'look back'

- Look back:
  - What happened?
  - How did it happen?
  - What was the outcome?

**know what your criteria for improvement is (SMART Goal setting)
**Focus on evaluating well

EVALUATION

"E-Valu": give Evidence for the VALUE of something

- Judge the Value (extent) based on criteria
  - Measure *the amount of* improvement or lack of
  - Needs a starting value
  - Use *evidence*: pre-, during & post-implementation of strategies

EXAMPLE OF AE2 - EVALUATION OF PERFORMANCE IMPROVEMENT

(Example from AT2)

I have achieved performance improvement of my skill in competition 1. I am now experiencing more degrees of freedom as I have learnt to adapt some stable movement patterns by not falling off the board when skating in a straight line. My movement quality looks less rigid and smoother compared to my initial performance as I am able to move further on the board whilst maintaining balance and composure. I also have faster pattern recognition as I am able to anticipate the execution of each push when moving on the board, thus affording me the opportunity to successfully skate from one end to the other. After completion of competition 1, I have overcome various rate limiters such as my lack of balance and coordination on the board, and I have now achieved my first short term goal of being able to skate from one end of the basketball court to the other. However, my movement quality & execution still required further improvement when attempting to execute a turn on the skateboard to change directions, my movements were rigid and awkward, seeking for stability. Due to my rigid and awkward movements, I froze, resisting movements, thus losing balance and falling off my board when trying to turn. My speed and power whilst moving on the board also requires further improvement as I am still moving at a moderately slow pace.

Criteria

Value judgement

Evidence to support

AE3 **EVALUATION** OF **IMPLEMENTED STRATEGIES**.

STRATEGIES

The means used to gain the improvement in the performance or participation.

- Strategies are implemented **outside of the game/performance situation** to impact the performance situation

- Think broadly & creatively, but *strategically* & purposefully (link to A3)
  - ANY training principle, practice type, coaching methodologies, psychological strategies etc.

AE3 **EVALUATION** OF IMPLEMENTED STRATEGIES.

EVALUATION

"E-Valu": give Evidence for the VALUE of something

- Judge the Value
  - Were the strategies effective?
  - To what extent?

- Based on criteria
  - Why were the strategies selected?
  - Did the strategies achieve this intended purpose?

AE3 EVALUATION OF IMPLEMENTED STRATEGIES.

FEEDBACK:
Incorrect rowing technique resulted in an inefficient kinetic chain and summation of force, reducing the distance rowed per stroke and therefore, distance rowed in 20 minutes.

STRATEGY:
Improve rowing technique with the continuous training method.

IMPACT ON PERFORMANCE:
Greater efficiency in kinetic chain and thus, summation of force, resulting in an increased distance rowed per stroke and therefore, increased distance rowed in a 20 minute duration.

AE3   **EVALUATION** OF **IMPLEMENTED STRATEGIES**.

- Judge the Value
  - Were the strategies effective?
  - To what extent?

AT2 Self-improvement Portfolio → Distance rowed in 20 mins

Evaluation of Strategy 1 – Correction of Rowing Technique:

The first strategy I implemented was corrected my rowing technique. During the initial test, my technique was biomechanically inefficient at generating force reducing the distance I rowed in 20-minutes. When correcting my technique throughout the first mesocycle, a trend occurred that when my stroke rate (strokes per minute) decreased, the distance I rowed per stroke increased (See Figure 3). Before correcting my technique, I performed 500 strokes throughout the 20 minutes, completing 25 strokes every minute. During each stroke, I rowed a distance of 7.82 meters, resulting in me rowing approximately 3908 meters in 20 minutes. After correcting my technique, my stroke rate decreased by 28% to 18 strokes per minute, reducing the total strokes performed to 360 strokes in 20 minutes. However, I increased the distance rowed per stroke by 39.9% as I rowed a distance of 10.94 meters per stroke, increasing the total distance I rowed by 0.87% as I rowed 3942 meters.
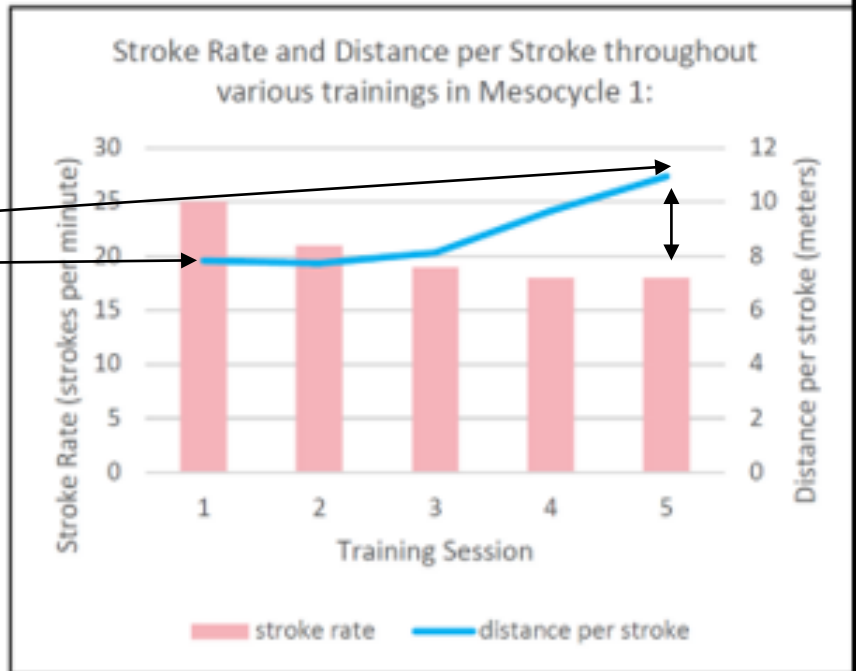
Stroke Rate and Distance per Stroke throughout various trainings in Mesocycle 1:

Figure 3: Stroke rate and distance per stroke throughout various trainings in mesocycle 1.

COMPARING AE2 & AE3

Both require EVALUATION

Both require supporting EVIDENCE

AE2 - Improvements

- Also requires reflection – being able to identify if there was improvement and what impact this had

- May include evaluation of tactics or strategies IN GAME situations as these are evidence of SKILFULNESS (Performance)

AE3 - Strategies

- Does NOT require reflection – therefore whether a student enjoyed a session or faced difficulties or found it challenging is not evidence of AE3

- Evaluation of strategies implemented OUTSIDE of the game/performance situation (but may still be on 'game day')
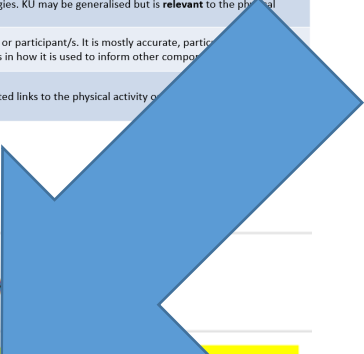
Support resources

A1	Performance Standard	Some examples of how students may demonstrate this
A	**Insightful** and **highly effective** contextual application	**Deep, refined and consistently accurate** use of relevant KU. **Focused use** of KU to make sense of movement concepts and/or strategies **specific to the context** of the physical activity and the participant/s. This is demonstrated when **using KU to inform**: the analysis and evaluation of evidence; the evaluation of participation or performance improvement; and the implementation and evaluation of strategies.
B	**Considered** and **mostly effective** contextual application	**Relevant and accurate** KU is used to make sense of movement concepts and/or strategies. It can be clearly identified how **KU has been used (considered) to inform** analysis and evaluation of evidence, evaluation of improvement and the implementation and evaluation of strategies. This use of KU is specific to the physical activity and the participant/s.
C	**Contextual** application	KU is **accurate** and there are **links** showing how **KU has been used to inform** other components of the task, including analysis and evaluation of evidence, evaluation of improvement and/or the implementation and evaluation of strategies. KU may be generalised but is **relevant** to the physical activity, the participant/s or both.
D	**Some** application	KU is **generalised.** to the physical activity or participant/s. It is mostly accurate, partic recounted, but there may be some errors in how it is used to inform other compo
E	**Attempted** application	KU is **stated.** There may be some attempted links to the physical activity o

Advice and strategies

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Physical Education Zoom 2021 - AE1, AE2, AE3

Stage 2 Physical Education - Advice on referencing data and sourc

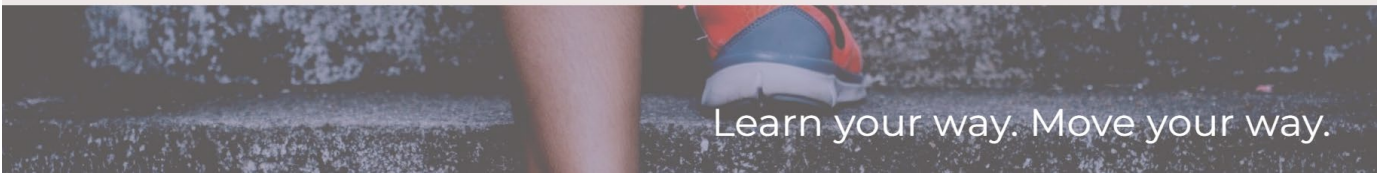Stage 2 Physical Education - Performance Standard Elaborations (updated for 2022)

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	A	B	C	D	E
AE1: Analysis and evaluation of evidence relating to physical activity.	**Critical** analysis and **perceptive** evaluation	**Mostly critical** analysis and **perceptive** evaluation	**Some critical** analysis and **perceptive** evaluation	**Some** analysis and description	**Attempted** analysis and description
AE2: Reflection on and evaluation of participation and/or performance improvement.	**Insightful** reflection on and evaluation	Reflection on and evaluation with **some insights**	**Some** reflection on and evaluation	**Some** reflection on and **description**	**Attempted** reflection on and description
AE3: Evaluation of implemented strategies.	**Perceptive** evaluation	**Mostly perceptive** evaluation	**Some** evaluation	**Description**	**Attempted** description

AE1: Analysis and evaluation of evidence relating to physical activity.

AE1	Performance Standard	Some examples of how students may demonstrate this.
A	**Critical** analysis and **perceptive** evaluation	Student **examines parts of evidence** and **draws out relationships** (trends, connections, comparisons, contrasts, causation, correlation) between different types or parts of evidence. **Evidence is synthesised** and, where possible, contrasted to determine **different perspectives** on how evidence could be interpreted and what this says about the participation or performance. Evidence used to support other points being made is consistently highly relevant. There is nuanced appreciation for the **validity and reliability** when using the evidence, which may look like a student demonstrating possible shortcomings when using the evidence. (At an upper A level, there may be intentional, targeted selection of evidence to support the point i.e. not an abundance of all evidence that has been collected being included within the response).
B	**Thoughtful** analysis and evaluation	Student **breaks down evidence** into parts and **identifies relationships** (trends, connections, comparisons, contrasts) between different types or parts of **evidence to examine** what it says about participation or performance. There may be **different perspectives** given on how evidence could be interpreted and what this says about the participation or performance. Evidence used to support other points being made is **relevant**.
C	**Competent** analysis and **some** evaluation	There is **some break down** of evidence into parts and **some relationships** (trends, connections, comparisons, contrasts) between types or parts of evidence are identified with **links made to participation or performance**. Evidence used to support other points being made is **mostly relevant**.
D	**Basic** analysis and description	The evidence is **explained, recounted or stated** as presented. There is a **basic attempt to breakdown** evidence and/or **identify a relationship** between pieces of evidence. The process of collecting evidence may be outlined.
E	**Attempted** description	Student **identifies or outlines what evidence they have**. There may be some reference to parts of the evidence in isolation from other parts. The process of collecting evidence may be outlined.

AE2: Reflection on and evaluation of participation and/or performance improvement.

AE2	Performance Standard	Some examples of how students may demonstrate this.
A	**Insightful** reflection on and evaluation	Student **examines parts or components** of the performance or participation improvement (or lack of) from **different perspectives** or with **consideration given to various factors** influencing the improvement outcomes. The reflection on improvement demonstrates an appreciation for the **complex, multidimensional nature of performance or participation improvement**. **Judgments** made about the value or level of improvement are supported with **multiple forms of evidence**.
B	**Considered** reflection on and evaluation with **some insights**	Student **examines parts or components** of the performance or participation improvement (or lack of). There **may be consideration given to different perspectives or other factors** influencing the improvement outcomes. There are **clear judgments** about the value or level of improvement **supported with evidence**. Some judgments may be supported with multiple forms of evidence.
C	**Competent** reflection on and **some** evaluation	Student **identifies** whether there was improvement or not with **some exploration into different parts or components** of the participation or performance. There is **some judgment** about the value or level of improvement which is supported with **some evidence**. The judgment/s may be general in nature and the evidence used may be broad and superficial.
D	**Basic** reflection on and **description**	Student **identifies** whether there was improvement or not in performance or participation. The performance or participation experience is **explained**. There may be information given about how the player felt about the experience or their general strengths and weaknesses rather than on the improvement (or lack of) that was attained.
E	**Attempted** reflection on and description	Student **outlines** the performance or participation experience with minimal reference to whether there was improvement or not.

AE3: Evaluation of implemented strategies.

AE3	Performance Standard	Some examples of how students may demonstrate this.
A	**Perceptive** evaluation	Evaluates **deeper** than the obvious, **judgment is nuanced and entirely founded on evidence** (criteria). Student **uses evidence to inform a judgment** that considers **different perspectives** on **why or how any particular strategy was effective and/or ineffective** and whether **the strategy achieved its intended outcomes**. These perspectives *may* include (but are not limited to) comparing different sources of evidence (examples include evidence collected from training/practice or performance situation or post-training fitness or skills testing), different viewpoints or applying different concepts from K&U to determine a level of value for the strategy. Students may use evidence of transfer from training/practice to the performance situation to support justification for the effective or ineffective aspects of the strategy.
B	**Thoughtful** evaluation	Evaluation of strategies, for the most part, is **informed by evidence** (criteria), and **beyond the superficial**. Student **uses evidence** to support the reasons for **why a strategy was effective or ineffective** and whether **the strategy achieved its intended outcomes**. Student is able to give a judgment about the value of particular aspects of strategies, perhaps identifying parts that were effective and parts that were ineffective. Evidence may include evidence collected from training/practice or performance situation or post-training fitness or skills testing.
C	**Description, with some evaluation**	*There needs to be clear evidence of some evaluation of at least one strategy.* There may be some description. The differentiating factor from a D level is that there is some evaluation – meaning the student provides a **judgement of the value of the strategy based on one or more criteria**. Evaluation may be superficial. For example, student provides a holistic judgment about the value of a strategy/ies. This may look like the student identifying that a training session was good/bad and giving some reasons why. Reasons may be general in nature.
D	**Description**	The experiences of implementing strategies are **recounted**. Student outlines, sometimes in great detail, their strategies (journey/training/practice) without providing a judgement of their value. For example, Student talks about how they felt when undertaking practice/training. Information about how the strategies looked and what happened is provided without a judgment given for how valuable these strategies were.
E	**Attempted description**	Student has **attempted to outline the strategies** that they implemented but it is relatively unclear