



PE.SP3 Sport Psychology: The Information-Processing Model, Guidance and Feedback

AQA 8582 · Calculators not allowed · about 50 minutes

Total Marks

Name: _____ Date: ____ / ____ / ____

Answer ALL questions. Show all your working.

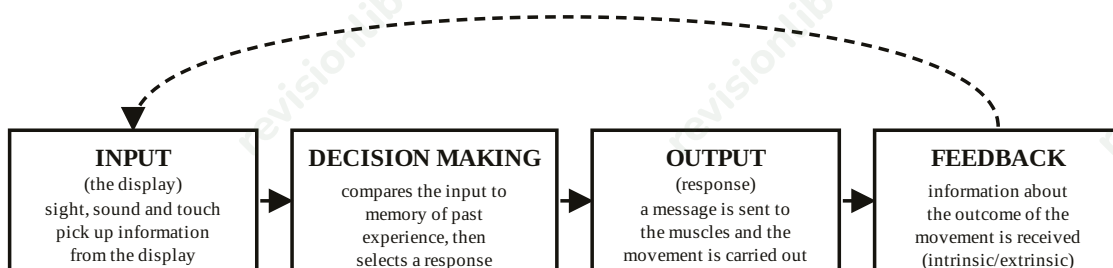
- 1** The basic information-processing model describes how a performer takes in information and produces a movement.

- ☐ A) Output, decision making, input, feedback
☐ B) Input, decision making, output, feedback
☐ C) Feedback, input, output, decision making
☐ D) Decision making, input, feedback, output

(Total for Question 1 is 1 mark)

- 2** Figure 1 shows the basic information-processing model.

feedback loop: the outcome is used to adjust the next attempt at input



Using Figure 1, explain what happens during the input and decision-making stages when a goalkeeper faces a penalty kick.

(Total for Question 2 is 3 marks)

3 Name the four stages of the basic information-processing model, in the correct order.

(a) Name stage 1. (1)

(b) Name stage 2. (1)

(c) Name stage 3. (1)

(d) Name stage 4. (1)

(Total for Question 3 is 4 marks)

4 Coaches can give a performer four different types of guidance.

(a) Describe 'visual guidance', giving an example. (2)

(b) Describe 'verbal guidance', giving an example. (2)

(Total for Question 4 is 4 marks)

5 Coaches can also use manual and mechanical guidance.

(a) Describe 'manual guidance', giving an example. (2)

(b) Describe 'mechanical guidance', giving an example. (2)

(Total for Question 5 is 4 marks)

- 6** Freya is a complete beginner learning her first somersault on a trampoline.
State the most appropriate type of guidance for Freya's coach to use, and justify your answer.

(Total for Question 6 is 2 marks)

- 7** Kwame is an experienced county-level javelin thrower working with his coach to fine-tune his release angle.
State the most appropriate type of guidance for Kwame's coach to use, and justify your answer.

(Total for Question 7 is 2 marks)

- 8** A coach continues to physically guide a performer's arm through a badminton clear shot every single week, long after the performer has learned the basic movement.
Explain one disadvantage of over-using manual guidance in this situation.

(Total for Question 8 is 3 marks)

- 9** A swimmer continues to wear armbands (mechanical guidance) for every session, well beyond the point where they have learned to float and kick unaided.
Explain one disadvantage of over-using mechanical guidance in this situation.

(Total for Question 9 is 2 marks)

10 Feedback can be classified as intrinsic or extrinsic.

(a) Describe 'intrinsic feedback', giving an example. (2)

(b) Describe 'extrinsic feedback', giving an example. (2)

(Total for Question 10 is 4 marks)

11 Feedback can also be classified as knowledge of results or knowledge of performance.

(a) Describe 'knowledge of results', giving an example. (2)

(b) Describe 'knowledge of performance', giving an example. (2)

(Total for Question 11 is 4 marks)

12 Which of the following is the best example of extrinsic feedback?

- ☐ A) A sprinter feeling that their start was slow
- ☐ B) A gymnast sensing that they landed off balance
- ☐ C) A coach telling a swimmer that their turn was too slow
- ☐ D) A cyclist feeling their legs burning with fatigue

(Total for Question 12 is 1 mark)

13 After a race, a rowing coach tells her crew: 'Your finishing time was 2 seconds slower than last week, and I noticed your catch at the start of the stroke was late on the third and fourth rowers.'

(a) Identify which part of the coach's comment is knowledge of results. (1)

(b) Identify which part of the coach's comment is knowledge of performance. (1)

(Total for Question 13 is 2 marks)

- 14** A beginner performer makes several mistakes while learning a new skill.
Explain why a coach might choose to give mostly positive feedback to this beginner, rather than focusing on their mistakes.

(Total for Question 14 is 3 marks)

- 15** Aisha's PE teacher is introducing her class to trampolining for the first time. Most pupils have never used a trampoline before, and safety is a key concern.
Discuss how the information-processing model, types of guidance and types of feedback could all be used together to help a beginner such as Aisha learn a basic trampoline skill safely and effectively.

(Total for Question 15 is 9 marks)

- 16** Which stage of the information-processing model is responsible for selecting the response a performer will make?

- ☐ A) Input
- ☐ B) Decision making
- ☐ C) Output
- ☐ D) Feedback

(Total for Question 16 is 1 mark)

- 17** State one way a performer's memory is used during the decision-making stage of the information-processing model.

(Total for Question 17 is 1 mark)

- 18** Explain why feedback is an essential part of the information-processing model, rather than simply being the 'end' of the process.

(Total for Question 18 is 2 marks)

- 19** A beginner is attempting a handstand against a wall in gymnastics for the first time. Suggest an appropriate combination of guidance and feedback for the coach to use, justifying your choices.

(Total for Question 19 is 3 marks)

- 20** Explain the difference between knowledge of results and knowledge of performance.

(Total for Question 20 is 2 marks)

- 21** State one named sporting example of manual guidance.

(Total for Question 21 is 1 mark)

Mark scheme · PE.SP3 Sport Psychology: The Information-Processing Model, Guidance and Feedback

Question 1

- **B1** B (input, decision making, output, feedback)
- **Answer: B**

Question 2

- **B1** input: the goalkeeper's senses (mainly sight) pick up information from the display, e.g. the run-up, hip position and foot angle of the penalty taker, oe
- **B1** decision making: this information is compared to memory of past penalties/experience, oe
- **B1** a decision is then selected/made about which way to dive (or whether to stay central), oe
- **Answer: At the input stage, the goalkeeper's senses (mainly sight) pick up information from the display, such as the penalty taker's run-up and hip/foot angle; at the decision-making stage, this information is compared to memory of past penalties, and a decision is made about which way to dive.**

Question 3

- (a) **B1** input (display)
- (a) **Answer: Input.**
- (b) **B1** decision making
- (b) **Answer: Decision making.**
- (c) **B1** output (response)
- (c) **Answer: Output.**
- (d) **B1** feedback
- (d) **Answer: Feedback.**

Question 4

- (a) **B1** the performer is shown what to do, e.g. by a demonstration or video, oe
- (a) **B1** example, e.g. a coach demonstrating a tennis serve, or showing a video of a model performer, oe
- (a) **Answer: Visual guidance is where the performer is shown what to do, for example by a live demonstration or a video, such as a coach demonstrating a tennis serve.**
- (b) **B1** the performer is told what to do using spoken words/instructions, oe
- (b) **B1** example, e.g. a coach calling out a short technical cue such as 'elbow up' during a swimming stroke, oe
- (b) **Answer: Verbal guidance is where the performer is told what to do using spoken instructions, for example a coach calling out a short cue such as 'elbow up' during a swimming stroke.**

Question 5

- (a) **B1** the coach physically supports/moves the performer's body through the correct movement, oe
- (a) **B1** example, e.g. a gymnastics coach physically supporting a beginner through a forward roll, oe
- (a) **Answer: Manual guidance is where the coach physically supports or moves the performer's body through the correct movement, for example supporting a beginner through a forward roll.**
- (b) **B1** an aid or piece of equipment is used to support/guide the performer through the movement, oe
- (b) **B1** example, e.g. armbands or a float in swimming, or a harness in trampolining, oe
- (b) **Answer: Mechanical guidance is where a piece of equipment supports or guides the performer through the movement, for example armbands in swimming or a harness in trampolining.**

Question 6

- **B1** manual guidance (or mechanical guidance, e.g. a spotting rig/harness), oe
- **B1** justification: this is a dangerous skill for a beginner, so physical support keeps her safe and builds confidence while she learns the movement, oe
- **Answer: Manual guidance (or mechanical guidance such as a spotting harness), because a first attempt at a somersault is dangerous for a complete beginner, so physical support keeps Freya safe and builds her confidence while she learns the movement.**

Question 7

- **B1** verbal guidance, oe
- **B1** justification: as an experienced performer, Kwame already understands the skill and can use short technical cues to make small adjustments without needing to be shown from scratch, oe
- **Answer: Verbal guidance, because as an experienced performer Kwame already understands the skill and can use short technical cues from his coach to make small adjustments, without needing a full demonstration or physical support.**

Question 8

- **B1** the performer can become over-reliant on the coach's physical support, oe
- **B1** they may not build their own kinaesthetic sense/feel for the correct movement, oe
- **B1** this can prevent the performer from being able to perform or correct the skill independently, e.g. in a real match without the coach present, oe
- **Answer: The performer can become over-reliant on the coach's physical support and never build their own kinaesthetic feel for the correct movement, which can leave them unable to perform or correct the skill independently, for example in a match where the coach is not present.**

Question 9

- **B1** the swimmer can become dependent on the aid, oe
- **B1** this can give a false sense of the movement/security, so their technique or confidence may not transfer when the aid is removed, oe
- **Answer: The swimmer can become dependent on the armbands, giving a false sense of the movement and of security, so their technique and confidence may not transfer well once the aid is removed.**

Question 10

- (a) **B1** feedback that comes from within the performer, using their own senses/feel for the movement, oe
- (a) **B1** example, e.g. a gymnast feeling that their landing was off-balance, oe
- (a) **Answer: Intrinsic feedback comes from within the performer, using their own senses or feel for the movement, for example a gymnast feeling that their landing was off-balance.**
- (b) **B1** feedback that comes from an outside/external source, oe
- (b) **B1** example, e.g. a coach telling a gymnast their landing was off-balance, or the crowd applauding, oe
- (b) **Answer: Extrinsic feedback comes from an external source, for example a coach telling a gymnast their landing was off-balance.**

Question 11

- (a) **B1** feedback about the outcome of the action, oe
- (a) **B1** example, e.g. being told the shot went in, or the time recorded for a race, oe
- (a) **Answer: Knowledge of results is feedback about the outcome of the action, for example being told the shot went in or a race time.**
- (b) **B1** feedback about the quality/technique of the movement itself, oe
- (b) **B1** example, e.g. a coach saying the follow-through was too short on a tennis shot, oe
- (b) **Answer: Knowledge of performance is feedback about the quality or technique of the movement itself, for example a coach saying the follow-through was too short on a tennis shot.**

Question 12

- **B1 C**
- **Answer: C**

Question 13

- (a) **B1** the finishing time being 2 seconds slower than last week, oe
- **(a) Answer: The finishing time being 2 seconds slower than last week.**
- (b) **B1** the comment about the late catch for the third and fourth rowers, oe
- **(b) Answer: The comment about the late catch for the third and fourth rowers.**

Question 14

- **B1** positive feedback highlights what the performer did well, oe
- **B1** this can increase confidence/self-belief and motivation to keep trying, oe
- **B1** too much negative feedback early on could discourage a beginner and reduce their motivation to continue learning the skill, oe
- **Answer: Positive feedback highlights what the beginner did well, which can increase their confidence and motivation to keep trying, whereas too much negative feedback early on could discourage a beginner and reduce their motivation to continue learning the skill.**

Question 15

- **Level 3** (7-9): A detailed and coherent response that accurately applies the information-processing model, at least one named type of guidance and at least one named type of feedback specifically to Aisha's beginner context, with a balanced judgement of what would work best and why. Sustained, accurate use of sport psychology terminology throughout.
- **Level 2** (4-6): Some accurate application of the information-processing model and/or named types of guidance and feedback to Aisha's context, though coverage of all three elements or the linking between them may be underdeveloped. Generally correct use of terminology.
- **Level 1** (1-3): Basic or generic statements about guidance, feedback or the information-processing model with little or no specific application to Aisha's beginner context.
- **Level 0** (0): No relevant content.
- **Indicative content:**
 - Input stage: Aisha needs clear information about what the skill looks like before she attempts it, e.g. by watching a demonstration (visual guidance).
 - Decision making: as a beginner, Aisha has little relevant memory/past experience of trampolining to draw on, so her decision making at this stage will be slow and effortful compared to an experienced performer.
 - Output: the movement itself (e.g. a basic straight bounce or seat drop) is carried out; because it is new, errors are likely on early attempts.
 - Feedback: after the attempt, Aisha needs feedback to correct the next attempt; this closes the loop back to a new input.
 - Guidance - visual: a demonstration lets Aisha see the correct technique before attempting it, well suited to a complex or unfamiliar skill.
 - Guidance - manual or mechanical: given the safety concern, physical support (e.g. a teacher spotting her, or a harness) is appropriate for a beginner attempting a new skill on unfamiliar equipment, reducing injury risk and building confidence, though it should be gradually withdrawn as she improves.
 - Feedback - extrinsic and knowledge of performance: as a beginner, Aisha's own intrinsic feedback/feel for the movement is not yet well developed, so extrinsic feedback from the teacher (particularly knowledge of performance on her technique, not just whether she landed safely) is especially valuable early on.
 - Feedback - positive: mostly positive feedback is likely to help sustain Aisha's motivation and confidence while she is still making frequent errors as a beginner.
 - Evaluative point: as Aisha's ability improves, the type of guidance and feedback used should change, e.g. moving from manual/mechanical guidance towards verbal guidance, and from mostly extrinsic feedback towards more reliance on her own intrinsic feedback, since continuing beginner-level support for too long can create dependency.

Question 16

- **B1 B**
- **Answer: B**

Question 17

- **B1** the new information is compared to memories of similar past situations/experience, to help select an appropriate response, oe
- **Answer: The new information is compared to memories of similar situations the performer has faced before, to help select an appropriate response.**

Question 18

- **B1** feedback gives the performer information about how successful the output was, oe
- **B1** this information becomes part of the input for the next attempt, so the performer's decision making and output can be adjusted/improved, oe
- **Answer: Feedback gives the performer information about how successful the previous output was, and this information then becomes part of the input for the next attempt, allowing decision making and output to be adjusted and improved.**

Question 19

- **B1** guidance: visual (a demonstration) and/or manual (physical support to hold the beginner upright), oe
- **B1** justification: this is a new, potentially risky balance skill for a beginner, so seeing the technique and having physical support builds confidence and keeps them safe, oe
- **B1** feedback: mostly extrinsic, positive feedback and knowledge of performance (e.g. on hand placement/body alignment), since the beginner's own intrinsic feedback is not yet developed for this unfamiliar skill, oe
- **Answer: The coach could use a visual demonstration and manual guidance (physical support to hold the beginner upright), since this is a new, risky balance skill and support keeps them safe and confident; feedback should be mostly extrinsic, positive knowledge of performance (e.g. on hand placement), since the beginner's own intrinsic feedback for this unfamiliar skill is not yet developed.**

Question 20

- **B1** knowledge of results is feedback about the outcome of the action (e.g. did the shot go in), oe
- **B1** knowledge of performance is feedback about the quality/technique of the movement itself (e.g. how the shot was executed), oe
- **Answer: Knowledge of results is feedback about the outcome of the action, such as whether the shot went in, whereas knowledge of performance is feedback about the quality or technique of the movement itself, such as how the shot was executed.**

Question 21

- **B1** any valid example, e.g. a coach physically supporting a beginner through a gymnastics roll, or holding a swimmer's body to demonstrate the correct stroke position, oe
- **Answer: For example, a coach physically supporting a beginner gymnast through a forward roll.**