Physical Education subject report

2021 cohort

February 2022

Queensland Government

QCAA Queensland Curriculum & Assessment Authority

220008

For all Queensland schools

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Introduction

Despite the challenges brought about by the COVID-19 pandemic, Queensland's education community can look back on 2021 with satisfaction at having implemented the first full assessment cycle in the new Queensland Certificate of Education (QCE) system. That meant delivering three internal assessments and one external assessment in each General subject.

This report analyses that cycle — from endorsing summative internal assessment instruments to confirming internal assessment marks, and designing and marking external assessment. It also gives readers information about:

- applying syllabus objectives in the design and marking of internal and external assessments
- patterns of student achievement.

The report promotes continuous improvement by:

- identifying effective practices in the design and marking of valid, accessible and reliable assessments
- recommending where and how to enhance the design and marking of valid, accessible and reliable assessment instruments
- providing examples of best practice where relevant, possible and appropriate.

Audience and use

This report should be read by school leaders, subject leaders and teachers to:

- inform teaching and learning and assessment preparation
- assist in assessment design practice
- assist in making assessment decisions
- help prepare students for external assessment.

The report is publicly available to promote transparency and accountability. Students, parents, community members and other education stakeholders can learn about the assessment practices and outcomes for General subjects (including alternative sequences (AS) and Senior External Examination (SEE) subjects, where relevant) and General (Extension) subjects.

Report preparation

The report includes analyses of data and other information from endorsement, confirmation and external assessment processes. It also includes advice from the chief confirmer, chief endorser and chief marker, developed in consultation with and support from QCAA subject matter experts.

Subject data summary

Subject completion

The following data includes students who completed the General subject or AS.

For the purposes of this report, while the 2021 summative units for the AS are AS units 1 and 2, this information will be included with the General summative Units 3 and 4.

Note: All data is correct as at 17 December 2021. Where percentages are provided, these are rounded to two decimal places and, therefore, may not add up to 100%.

Number of schools that offered the subject: 369.

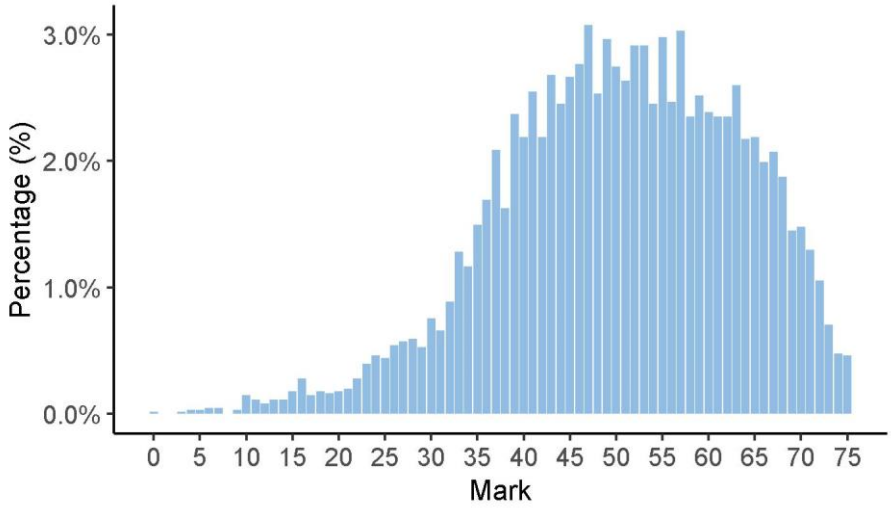
Completion of units	Unit 1	Unit 2	Units 3 and 4
Number of students completed	7136	6703	6025

Units 1 and 2 results

Number of students	Satisfactory	Unsatisfactory
Unit 1	6350	786
Unit 2	6190	513

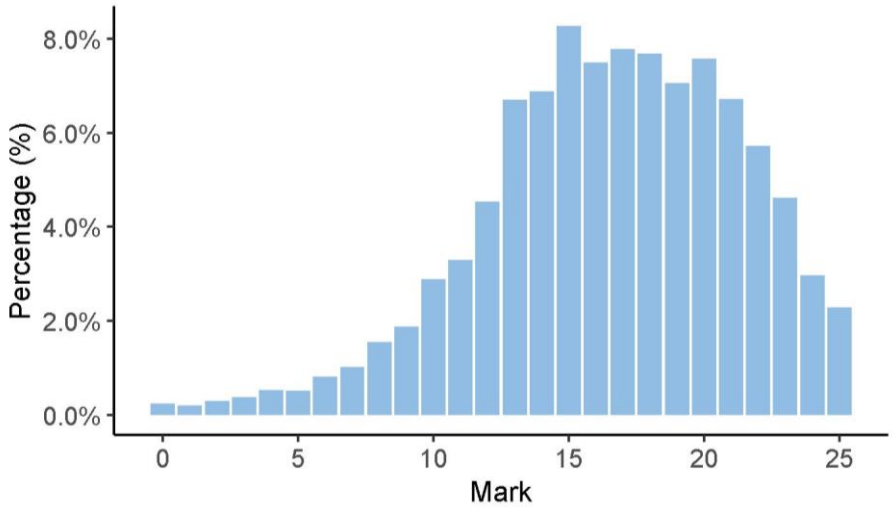
Units 3 and 4 internal assessment (IA) results

Total marks for IA

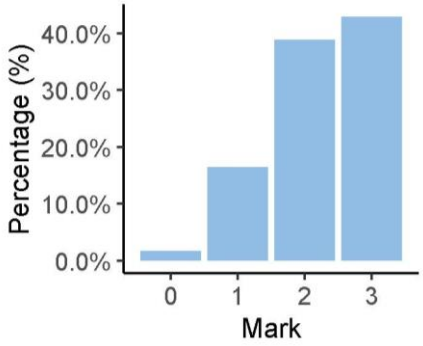


IA1 marks

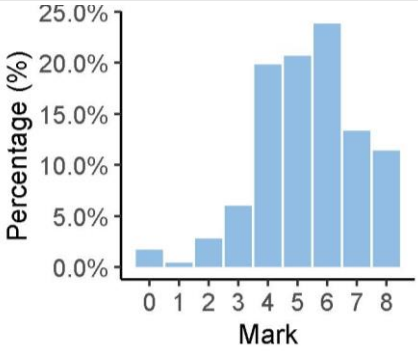
IA1 total



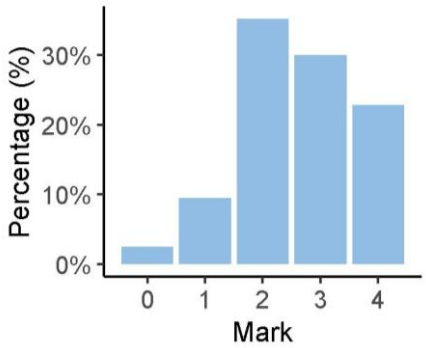
IA1 Criterion: Explaining



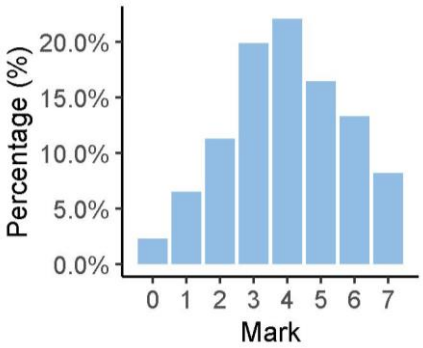
IA1 Criterion: Demonstrating and applying



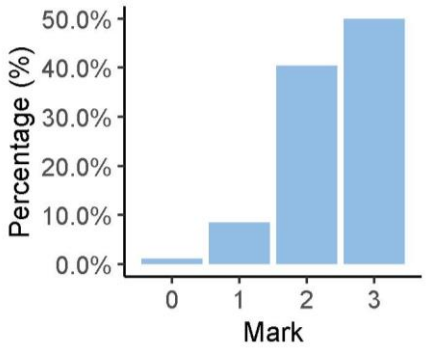
IA1 Criterion: Analysing



IA1 Criterion: Evaluating and justifying

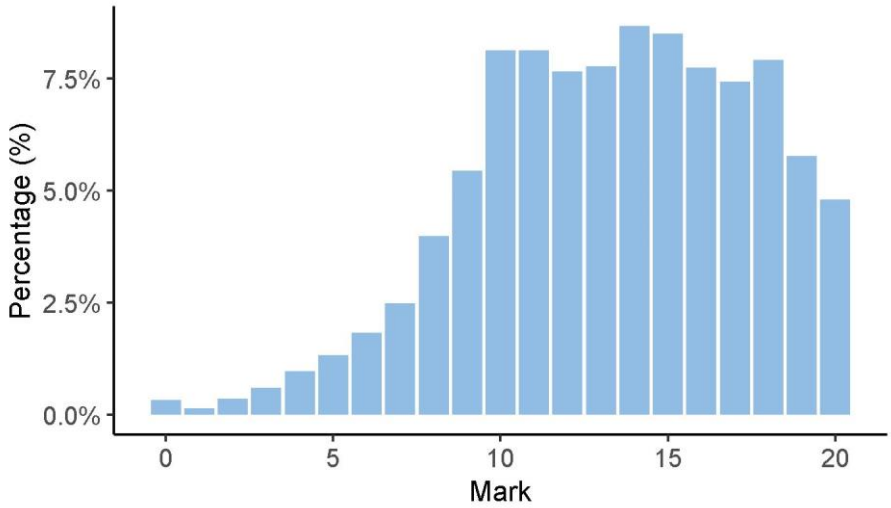


IA1 Criterion: Communicating

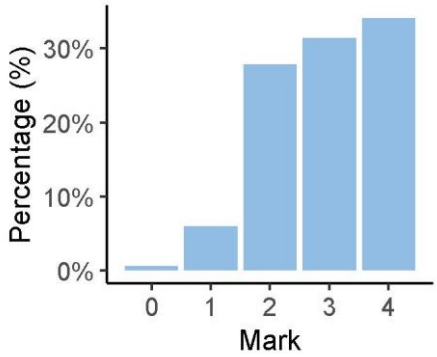


IA2 marks

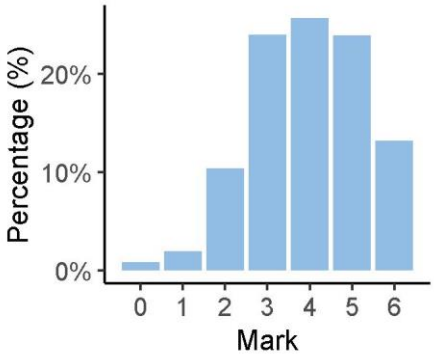
IA2 total



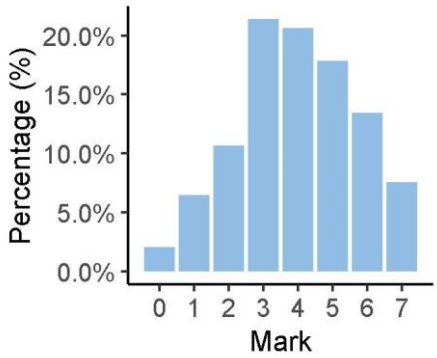
IA2 Criterion: Explaining



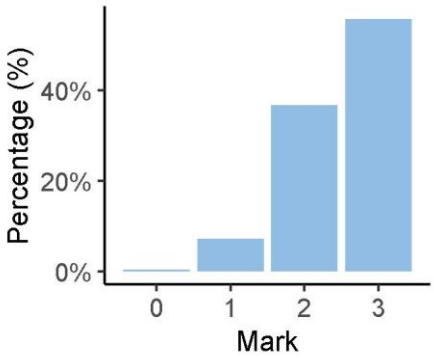
IA2 Criterion: Analysing



IA2 Criterion: Evaluating and justifying

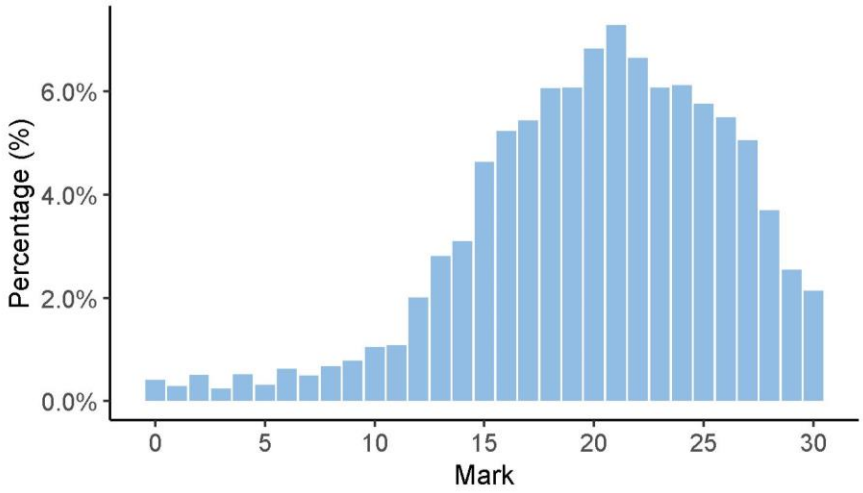


IA2 Criterion: Communicating

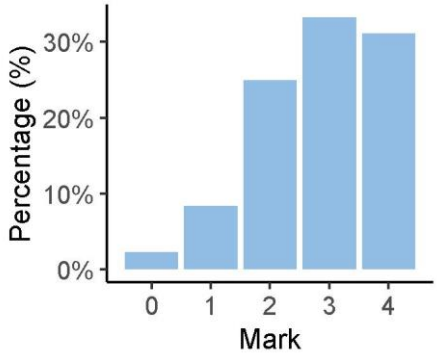


IA3 marks

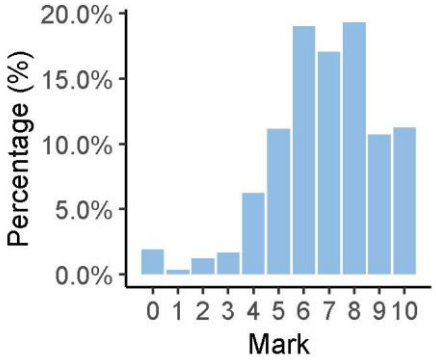
IA3 total



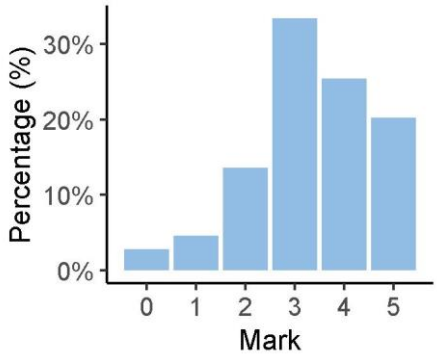
IA3 Criterion: Explaining



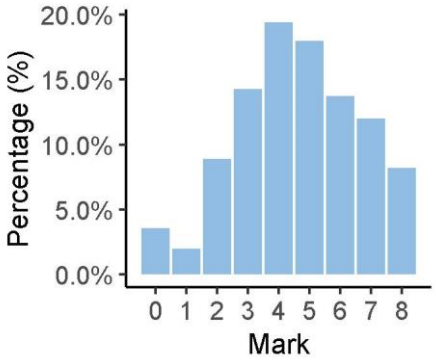
IA3 Criterion: Demonstrating and applying



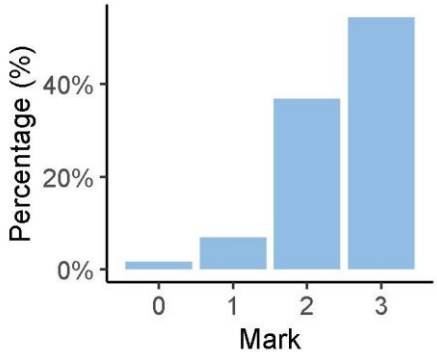
IA3 Criterion: Analysing



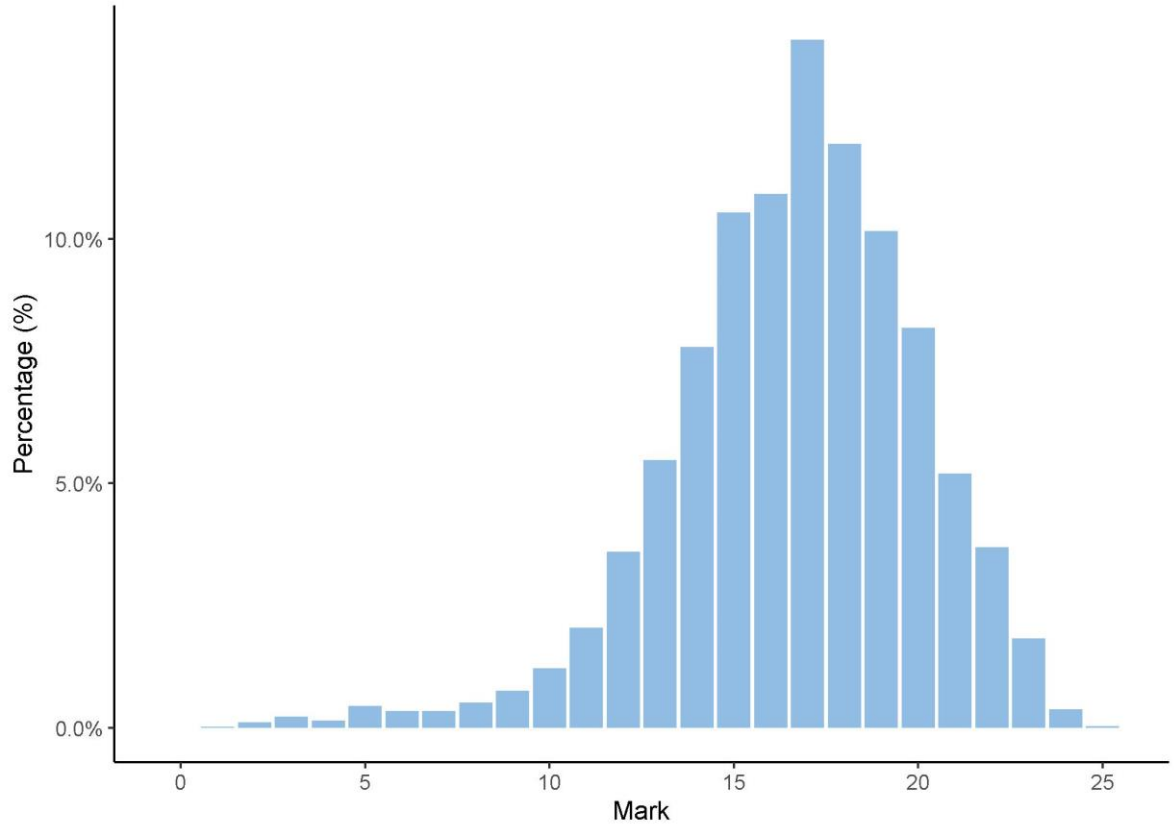
IA3 Criterion: Evaluating and justifying



IA3 Criterion: Communicating

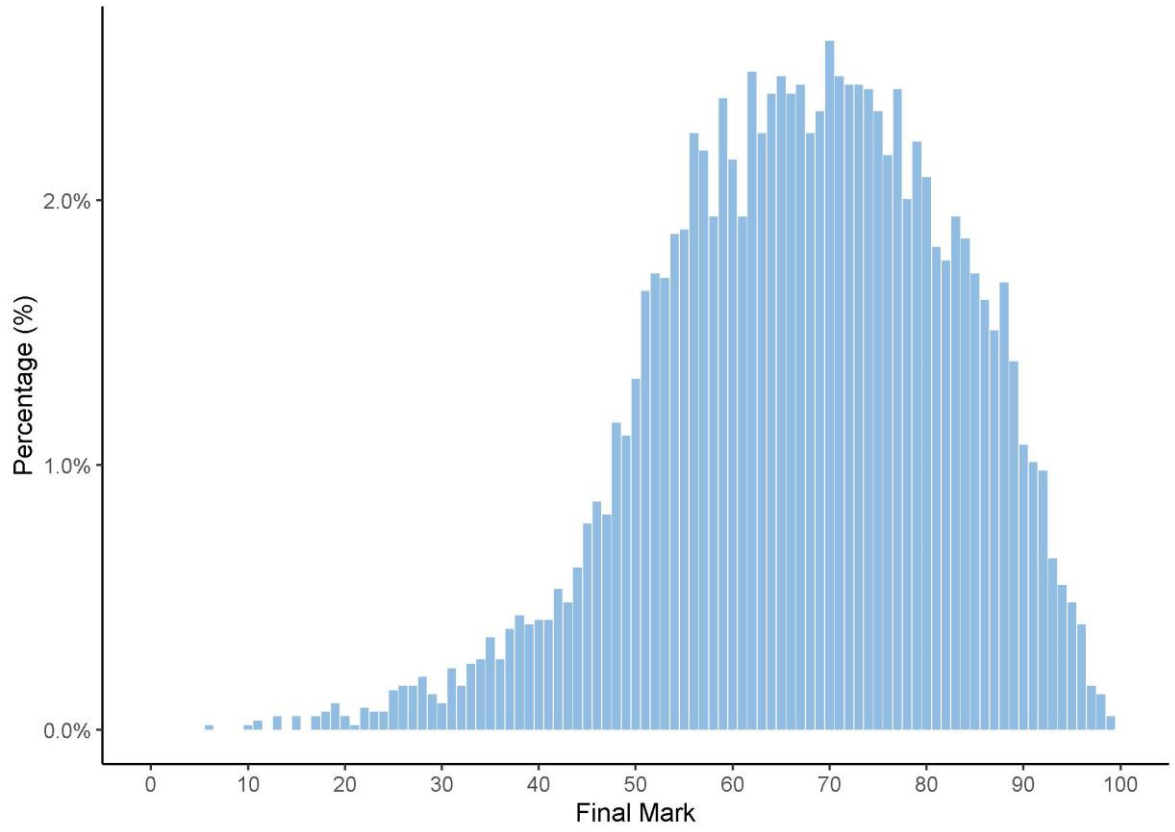


External assessment (EA) marks



Final subject results

Final marks for IA and EA



Grade boundaries

The grade boundaries are determined using a process to compare results on a numeric scale to the reporting standards.

Standard	A	B	C	D	E
Marks achieved	100–82	81–66	65–45	44–19	18–0

Distribution of standards

The number of students who achieved each standard across the state is as follows.

Standard	A	B	C	D	E
Number of students	1144	2221	2254	389	17

Internal assessment

The following information and advice pertain to the assessment design and assessment decisions for each IA in Units 3 and 4. These instruments have undergone quality assurance processes informed by the attributes of quality assessment (validity, accessibility and reliability).

Endorsement

Endorsement is the quality assurance process based on the attributes of validity and accessibility. These attributes are categorised further as priorities for assessment, and each priority can be further broken down into assessment practices.

Data presented in the Assessment design section identifies the reasons why IA instruments were not endorsed at Application 1, by the priority for assessments. An IA may have been identified more than once for a priority for assessment, e.g. it may have demonstrated a misalignment to both the subject matter and the assessment objective/s.

Refer to the quality assurance tools for detailed information about the assessment practices for each assessment instrument.

Percentage of instruments endorsed in Application 1

Number of instruments submitted	IA1	IA2	IA3
Total number of instruments	372	372	370
Percentage endorsed in Application 1	22%	61%	55%

Confirmation

Confirmation is the quality assurance process based on the attribute of reliability. The QCAA uses provisional criterion marks determined by teachers to identify the samples of student responses that schools are required to submit for confirmation.

Confirmation samples are representative of the school's decisions about the quality of student work in relation to the ISMG and are used to make decisions about the cohort's results. If further information is required about the school's application of the ISMG to finalise a confirmation decision, the QCAA requests additional samples.

Schools may request a review where an individual student's confirmed result is different from the school's provisional mark in one or more criteria and the school considers this result to be an anomaly or exception.

The following table includes the percentage agreement between the provisional marks and confirmed marks by assessment instrument. The Assessment decisions section of this report for each assessment instrument identifies the agreement trends between provisional and confirmed marks by criterion.

Number of samples reviewed and percentage agreement

IA	Number of schools	Number of samples requested	Number of additional samples requested	Percentage agreement with provisional marks
1	364	2138	426	73.08%
2	364	2005	300	84.07%
3	362	2019	266	79.83%

Internal assessment 1 (IA1)

Project — folio (25%)

This assessment focuses on an inquiry process that requires the application of a range of cognitive and technical processes and skills, and theoretical understandings. Students document the iterative process of demonstrating and applying conceptual understandings through the psychomotor domain to devise a personal tactical strategy. Students evaluate the effectiveness of the tactical and movement strategies and justify using primary and secondary data. The multimodal response is a coherent work that includes visual, written and/or spoken modes.

Assessment design

Validity

Validity in assessment design considers the extent to which an assessment item accurately measures what it is intended to measure and that the evidence of student learning collected from an assessment can be legitimately used for the purpose specified in the syllabus.

Reasons for non-endorsement by priority of assessment

Validity priority	Number of times priority was identified in decisions*
Alignment	298
Authentication	23
Authenticity	10
Item construction	43
Scope and scale	25

*Each priority might contain up to four assessment practices.

Total number of submissions: 372.

Effective practices

Validity priorities were effectively demonstrated in assessment instruments that:

- accurately replicated the syllabus specifications in the task, providing clear instructions that informed students about the processes and elements required to complete the response, without leading students to a pre-determined response or repeating cognitions
- featured authentication strategies reflecting QCAA guidelines for assuring student authorship
- provided appropriate information, in line with syllabus conditions, about the scale of knowledge and skills students are required to demonstrate when completing the task.

Practices to strengthen

It is recommended that assessment instruments:

- match the syllabus specifications. Concise and consistent specifications are essential to make clear the requirements for all elements of the assessment task
- include and clarify specifications for the supporting evidence, which should address assessment Objectives 2 and 3 only
- align the selected physical activity context with the prescribed categories and subject matter found within the syllabus
- state clearly that students should focus on the specialised movement sequences for one movement strategy to devise a personal tactical strategy, rather than specifying a principle of play, which would potentially narrow the task.

Accessibility

Accessibility in assessment design ensures that no student or group of students is disadvantaged in their capacity to access an assessment.

Reasons for non-endorsement by priority of assessment

Accessibility priority	Number of times priority was identified in decisions*
Bias avoidance	0
Language	55
Layout	23
Transparency	29

*Each priority might contain up to four assessment practices.

Total number of submissions: 372.

Effective practices

Accessibility priorities were effectively demonstrated in assessment instruments that:

- accurately used the syllabus specifications improving bias avoidance, language, layout and transparency
- used appropriate language and avoid unnecessary jargon, specialist language and/or colloquial language
- presented free from errors, modelling accurate spelling, grammar, punctuation and other textual features
- provided subject-specific information directing students to the prescribed subject matter.

Practices to strengthen

It is recommended that assessment instruments:

- avoid using bold, italics and other formatting features to alter specifications, making some specifications appear more important
- are free from errors in spelling, grammar and punctuation
- model the language and prescribed terminology of the syllabus.

Assessment decisions

Reliability

Reliability is a judgment about the measurements of assessment. It refers to the extent to which the results of assessments are consistent, replicable and free from error.

Agreement trends between provisional and confirmed marks

Criterion number	Criterion name	Percentage agreement with provisional	Percentage less than provisional	Percentage greater than provisional	Percentage both less and greater than provisional
1	Explaining	90.66%	8.52%	0.82%	0%
2	Demonstrating and applying	85.44%	12.64%	0.82%	1.1%
3	Analysing	85.71%	13.74%	0%	0.55%
4	Evaluating and justifying	78.02%	20.88%	0.55%	0.55%
5	Communicating	92.03%	6.32%	1.37%	0.27%

Effective practices

Accuracy and consistency of the application of the ISMG for this IA was most effective when:

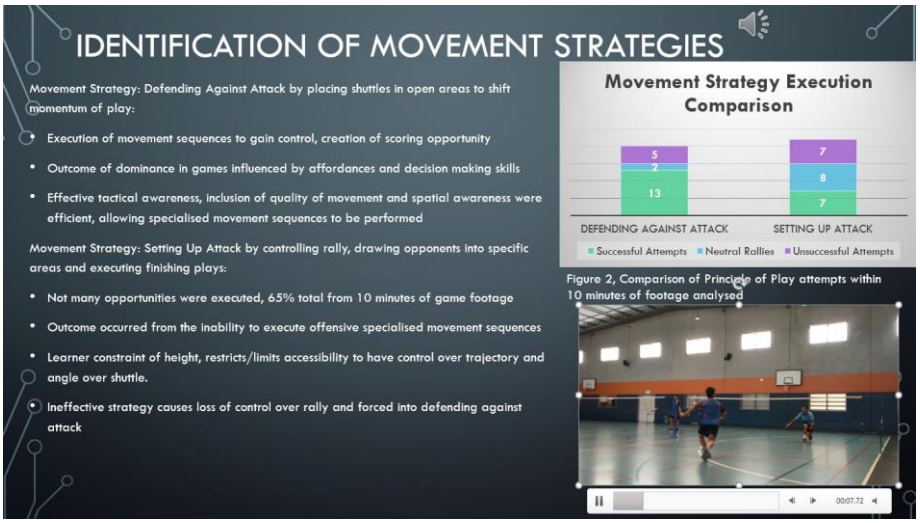
- the evaluation of personal performance was located in the 9–11 minute multimodal and not in the 2–3 minutes of supporting evidence (General and Alternative Sequence)
- analysis of primary and secondary data was relevant to the personal tactical strategy and ascertained relationships between the below characteristics (rather than analysing each one in isolation)
  - demands of the specialised movement sequences and one movement strategy
  - task, learner and environmental constraints that limit or enable personal or team performance
  - application of the principles of decision-making based on the presented opportunities for action
- submission of the supporting evidence was accompanied by appropriate student identification and contained appropriate commentary with no distracting elements or background noises (General and Alternative Sequence)
- the evaluation regarding the effectiveness of the tactical strategy included appraisal of the outcome, implications and limitations of the applied principles of decision-making (i.e. Read, React, Respond, Recover)
- consideration was given to the qualifiers in matching evidence to the characteristics in the demonstrating and applying ISMG (General and Alternative Sequence).

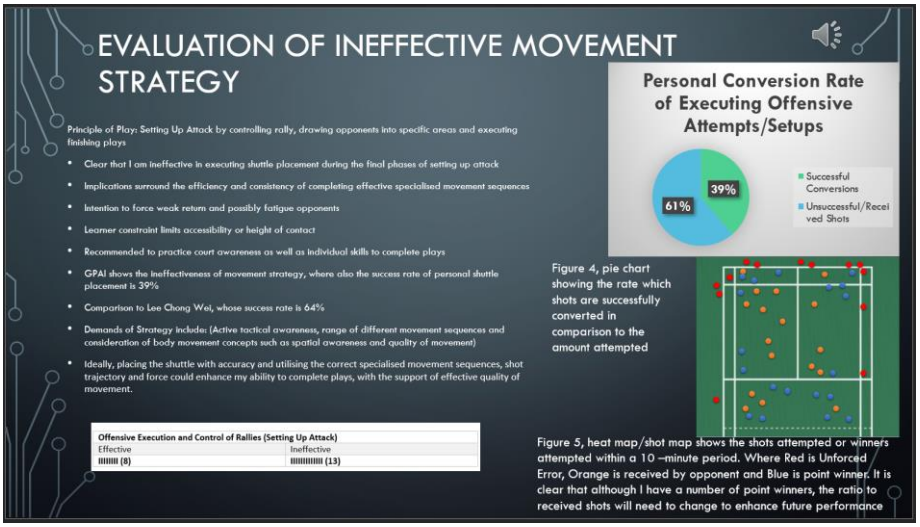
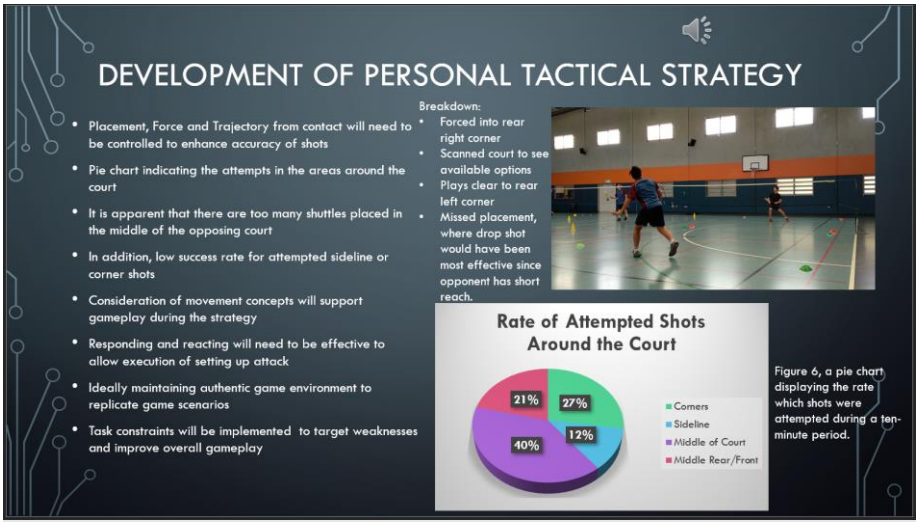
Samples of effective practices

The following are excerpts from a response that illustrates the characteristics for the criteria. The excerpts may provide evidence of more than one criterion. The characteristics identified may not be the only time the characteristics have occurred throughout a response.

These student response excerpts have been included:

- to demonstrate insightful analysis and discerning synthesis of primary and secondary data to ascertain the most significant relationships between the demands relating to movement, constraints, and principles of decision-making. This ensured the depth required for the upper performance level for the Analysing criterion
- to demonstrate critical evaluation of the specialised movement sequences and movement strategy
- to demonstrate appraisal of elements of the outcomes, implications and limitations in the task
- to demonstrate learner and environmental constraints and the applied principles of decision-making
- to demonstrate insightful analysis and discerning synthesis of data in devising a personal tactical strategy for optimising performance for one movement strategy.

Analysing (3–4 marks)	**Excerpt 1**  Excerpt 1 content (audio, 1 min 37 sec) www.qcaa.qld.edu.au/curriculum-assessment/portal/media/snr_pe_19_ia1_snip_1.mp3

Evaluating (6–7 marks)	**Excerpt 2**  Excerpt 2 audio file (audio, 1 min 9 sec) https://www.qcaa.qld.edu.au/curriculum-assessment/portal/media/snr_pe_19_ia1_snip_3.mp3
Analysing (3–4 marks)	**Excerpt 3**  Excerpt 3 audio file (audio, 47 sec) https://www.qcaa.qld.edu.au/curriculum-assessment/portal/media/snr_pe_19_ia1_snip_4.mp3

Practices to strengthen

To further ensure accuracy and consistency of the application of the ISMG for this IA, it is recommended that:

- evaluation of personal performance occurs in the 9–11 minute multimodal. Some submissions had evidence of ‘evaluation of performance’ in the supporting video of 2–3 minutes of demonstrating and applying evidence. It is imperative for the 9–11 minute multimodal to provide evidence of Objectives 1, 4, 5, 6 and 7 only, and for the supporting evidence (separate to the multimodal) of 2–3 minutes to provide evidence of Objectives 2 and 3 only

- students have a greater understanding of the relevance of, and process in, delivering the evaluation of personal performance in informing the tactical strategy design, implementation and justification of the performance
- analysis is comprised of both primary and secondary data — what this data looks like, its purpose and its importance. Often, students relied on only primary or only secondary data. This was a limiting factor in applying the ISMG (General and Alternative Sequence)
- the multimodal contains the mandatory visual features in conjunction with either written and/or spoken modes, as prescribed in the syllabus. Commonly, multimodal pieces use all modes, with each mode contributing significantly to the response, i.e. visual features throughout the folio; written text on slides or annotations; and a voice overlay that provides further elaboration of ideas. However, as specified in the *Confirmation submission information* document (see the QCAA Portal > Syllabus tile > Resources tab), scripts are not used in matching evidence to the ISMG and do not constitute engagement with the written mode (General and Alternative Sequence)
- subject matter relating to 'principles of decision-making' is specifically referenced in student submissions. This subject matter relates to 'Read, Respond, React, Recover', and was often addressed in a superficial or general manner or missing from student responses altogether. This subject matter was also often included in a 'definition' manner rather than applied to personal performance or the effectiveness of the tactical strategy and, as such, not meeting the needs of the performance-level descriptors in the 'Explaining and analysing' criteria
- students analyse primary and secondary data to inform their evaluation of performance in order to devise their tactical strategy. The interconnected relationships between these elements within the folio are important to ensure the depth of the upper performance level is achieved within assessment conditions.

Additional advice

- The submission of the supporting evidence (2–3 minute video) should be a separate MP4 file (as per confirmation submission information) that clearly and appropriately identifies the student. The supporting evidence provided should accurately reflect the school's provisional marks, showing evidence of the student performing multiple movement strategies within multiple principles of play. The supporting evidence should not contain commentary or distracting or inappropriate comments/music from behind the camera and should be within an authentic performance environment, as per syllabus requirements, and not merely a demonstration of movement sequences or strategies in isolation (General and Alternative Sequence).
- Support students to develop their understanding of the definitions of 'strategy', 'tactical awareness' and 'tactical strategies' found in the syllabus glossary to strengthen the delivery and clarity for students in addressing the syllabus requirements.
- The school's assessment policy regarding redaction is reflective of the *QCIA and QCE policy and procedures handbook*. When work exceeds assessment conditions, requiring redaction, the applied redaction processes should be clearly indicated on the ISMG (General and Alternative Sequence).

Internal assessment 2 (IA2)

Investigation — report (20%)

Students are required to research an ethical dilemma through the collection, analysis and synthesis of primary data and secondary data. The investigation uses research or investigative practices to assess a range of cognitions in a class, school or community physical activity context. Students devise an ethics strategy and analyse and synthesise data relating to this dilemma in the process of evaluating the effectiveness of the strategy in optimising engagement in the identified physical activity context.

Assessment design

Validity

Validity in assessment design considers the extent to which an assessment item accurately measures what it is intended to measure and that the evidence of student learning collected from an assessment can be legitimately used for the purpose specified in the syllabus.

Reasons for non-endorsement by priority of assessment

Validity priority	Number of times priority was identified in decisions*
Alignment	116
Authentication	12
Authenticity	15
Item construction	20
Scope and scale	23

*Each priority might contain up to four assessment practices.

Total number of submissions: 372.

Effective practices

Validity priorities were effectively demonstrated in assessment instruments that:

- accurately embedded the syllabus specifications into the task. The task required supporting authentication through the provision of an appropriate class, school or community contextualisation, focusing on the ethical dilemma, and providing meaningful connection to the framework of the assessment instrument
- featured authentication strategies, reflecting QCAA guidelines for assuring student authorship
- provided an accurate scale of information representative of syllabus conditions, knowledge, and skills students are required to demonstrate when completing the task.

Practices to strengthen

It is recommended that assessment instruments:

- replicate the prescribed syllabus specifications to direct students to investigate one ethical dilemma in a class, school, or community physical activity context to devise an ethics strategy
- contain a point of difference from the previous year. This may include a change in the class, school or community context, or a change to the prescribed datasets or time periods around the analytics required in devising the ethics strategy.

Accessibility

Accessibility in assessment design ensures that no student or group of students is disadvantaged in their capacity to access an assessment.

Reasons for non-endorsement by priority of assessment

Accessibility priority	Number of times priority was identified in decisions*
Bias avoidance	1
Language	39
Layout	7
Transparency	14

*Each priority might contain up to four assessment practices.

Total number of submissions: 372.

Effective practices

Accessibility priorities were effectively demonstrated in assessment instruments that:

- accurately used the syllabus specifications for improving bias avoidance, language, layout and transparency
- used appropriate language and avoided unnecessary jargon, specialist language and colloquial language
- presented free from errors and modelled accurate spelling, grammar, punctuation and other textual features.

Practices to strengthen

It is recommended that assessment instruments:

- use the language from the subject matter, transferred into an educational setting, reflecting alignment to the assessment objectives and delivering a personal and contextualised learning experience
- provide the opportunity for students to use research or investigative practices to assess a range of cognitions in a class, school, or community physical activity context.

Assessment decisions

Reliability

Reliability is a judgment about the measurements of assessment. It refers to the extent to which the results of assessments are consistent, replicable and free from error.

Agreement trends between provisional and confirmed marks

Criterion number	Criterion name	Percentage agreement with provisional	Percentage less than provisional	Percentage greater than provisional	Percentage both less and greater than provisional
1	Explaining	93.41%	5.77%	0.55%	0.27%
2	Analysing	90.11%	9.07%	0.82%	0%
3	Evaluating and justifying	87.91%	11.26%	0.55%	0.27%
4	Communicating	96.98%	1.37%	1.65%	0%

Effective practices

Accuracy and consistency of the application of the ISMG for this IA was most effective when:

- subject matter within the student response clearly aligned with the subject matter in the ISMG and syllabus, including coverage of ethical dilemma, ethics and values, and integrity and fair play
- the ethical dilemma within the assessment task provided appropriate scope, accessibility and opportunity for each student to develop an individual response
- primary and secondary data was embedded within the analysis, evaluation and justifications relating to the course of action in response to the ethical dilemma.

Samples of effective practices

The following are excerpts from a response that illustrate the characteristics for the indicated criteria. The excerpts may provide evidence of more than one criterion. The characteristics identified may not be the only time the characteristics have occurred throughout a response.

These student response excerpts have been included:

- to demonstrate insightful analysis of primary and secondary data which shows the tensions between unethical conduct, positive engagement, fair play and integrity. The language is technical and uses the subject matter from the ISMG and syllabus, demonstrating a clear match to the characteristics in the upper performance levels in the ISMG
- to demonstrate discerning synthesis using primary and secondary data to explore the ethical dilemma, using subject matter relevant to the ethical dilemma and ISMG. This ensures the Investigation report upholds assessment specifications in length, whilst providing the depth of response for the upper performance level in the Analysing criterion. The student insightfully articulates the tensions that exist between stakeholders, fair play, and integrity.

Analysing (5–6 marks)

Excerpt 1

2.0 Discussion

2.1 The Ethical Dilemma and Tensions in Integrity and Fair play

The ethical dilemma which exists in [redacted] regards the unequitable team selections resulting in teams unfairly based on past performance, further perpetuated by the unethical conduct of selectors spending uneven levels of time with each trialling squad. Trialling squads, formed by football administrators, groups students based on past team placements, assigning specific level selectors to one designated squad of that level. This unethically increases the likelihood of teams to remain almost exactly the same, simultaneously limiting the opportunity for players to move between teams and for their skills be appropriately considered, with survey results confirming, within the top three teams, 70% remained in the same team, of these players, 70% were members of the A team(figure 1)(Lambert, 2020). Ultimately, in decreasing a player's opportunity to play at their respective level, the trialling process impacts the positive engagement of students in the sport, with over 70% of players stating being placed in a team that did not match their skill level, decreased enjoyment(figure 2)(Lambert, 2020). In decreasing the enjoyment of students, fair play is thereby decreased, perpetuated by the lack of integrity induced by unethical conduct. Further, in mis-grading participants, players and teams are led to play against unfairly graded opponents who may vary in technical development, diminishing fair play in competition and thus the positive engagement of students. Paul Kennedy, local sports presenter states, "it's very important to help kids enjoy sport." and thus, in not supporting positive engagement through integrity of processes, fair play is diminished(Kennedy, n.d.).

This creates tensions both within teams and between administrators and students. By diminishing the integrity of the trials in not fairly segmenting time for each squad, over 80% of students surveyed suggest themselves and others have been disadvantaged by team placements(figure 3)(Lambert, 2020). Consequently, this limits the positive engagement of students not participating at their respective level, decreasing motivation and commitment levels to the team which can cause tension with teammates who feel disadvantaged by the player's motivation(Fair Play International, 2015). Tensions also exist between students and the administrative department and selectors, wherein participants see the unethical conduct, and thus see administrators don't respect the level of players. This is evident with 80% of students acknowledging they felt the trials were conducted unfairly, with coaches and selectors not paying even amounts of attention to all trialling squads(figure 4)(Lambert, 2020). This ultimately decreases the integrity of the trialling process through not applying ethical values, and thereby limiting the fair play and team cohesion in future competition, and thus levels of positive engagement(Stewart et.al., 2019).

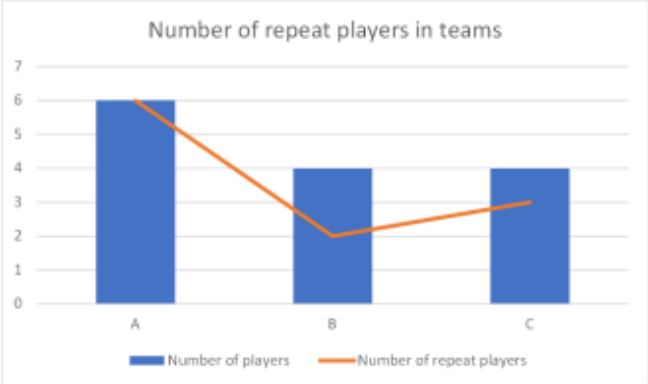


Figure 1. Number of repeat players in [redacted] football teams, (Lambert, 2020)

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Excerpt 1 (continued)

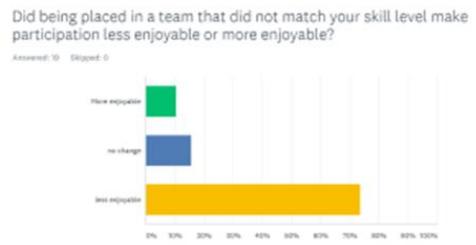


Figure 2. Enjoyment levels of players, (Lambert, 2020)

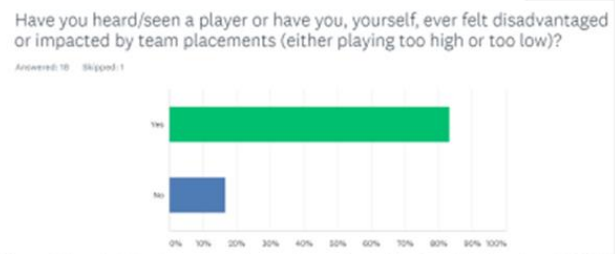


Figure 3. level of disadvantaged players from mis-grading in trials, (Lambert, 2020)

Figure 4. Student thoughts on fairness of trials, (Lambert, 2020)

Analysing (5–6 marks)	**Excerpt 2** 2.2 Influence of Stakeholders and the Dilemma Both local stakeholders, such as the [redacted] sports department, coaches and players, and national football stakeholders like Football Federation Australia(FFA) have influence over the school sport values and ethicality exhibited through the [redacted] trialling processes. Within [redacted], each sport is encouraged to uphold a series of school values including respect, joy, and integrity to ensure equality among participants and further, maximise positive engagement([redacted], 2020). However, [redacted] football trials do not replicate these values due to negative administrator behaviour causing bias team placements which leads to limited respect for player's skill levels and joy, resultant of the limited trialling integrity. Most prominently, the local stakeholder administrators, the [redacted] sports department, are heavily involved in the selection process through coordinating dates, times and further, designating trialling squads from past team placements prior to trials([redacted], 2019). This process does not abide by ethical standards characterised by the school values of justice, respect, and joy through disregarding and not respecting player improvement between seasons, while unjustly decreasing participant's opportunity to trial for their favoured teams. Further, if mis-graded, trials inhibit the level of joy gained through the sport for player stakeholders. Further, local coach and selector stakeholders have similar influence over the ethical standards of trials and similarly decrease the involvement of school values including integrity by not spending even amounts of time with each trialling squad which facilitates the unfair selections process. This further diminishes respect for players involved through neglecting their performance, and thereby diminishing integrity and justice of the selections, eventually disrupting the joy of participants. Correspondingly, the sports department does not provide a specific mention of selector conduct during trials, signifying a need for review of the ethical code of conduct to support the values upheld by the school to provide an ethical trialling environment. Further, national stakeholders including the FFA and International Federation of Football Association(FIFA), have a significantly smaller influence over the ethics and values upheld in the [redacted] football trialling process due to their limited influence over grassroots level programs like that adopted at [redacted]. However, with their professionalism, these institutions provide clear ethical basis of trials and selections regarding both the participation and conduct of players, coaches and selectors necessary for high levels of playing which should ultimately be integrated to improve the endorsement of values through fair and just conduct(FFA, 2007). The expected outcome of implementing this strategy is likely to improve the integrity and fair play of the football selection processes through ensuring the enforcement of ethical rules and fair team formation. The strategy does so by ensuring selectors pay even amounts of time with each trialling group, guaranteeing players are fairly judged on recent experience and thus supporting the equality associated with integrity and fair competition involved in fair play, ultimately ensuring greater positive engagement of students playing at appropriate levels. Further, implications of applying this strategy is likely to see an improvement in team cohesion and an improvement in [redacted] team results through decreasing the bias in games wherein students are not playing at appropriate levels. Additionally, the improvement in integrity and fair play in the sport, will, through increasing the overall positive engagement of players, encourage more students to continue and start playing the sport. Unfortunately, while these improvements are able to increase the integrity, and ultimately the fair play involved with the sport, the strategy proposed also aims to extend the number of trial sessions where time may not be available, and increase the cost of hiring selectors for more trials.

Practices to strengthen

To further ensure accuracy and consistency of the application of the ISMG for this IA, it is recommended that:

- when analysing the selected primary and secondary data, the response shows the relationship between the ethical dilemma, the influence of local and national stakeholders, integrity and fair play, and previously used strategies. The analysis of primary and secondary data for any other purpose does not align with the ISMG and should be avoided
- teachers explicitly reinforce the importance of evaluating the effectiveness of the ethics strategy in optimising integrity and positive engagement within the chosen context. This is specifically achieved through appraising the potential outcome, implications, and limitations of the strategy
- teachers ensure scaffolding does not lead students to deliver consistent or pre-determined responses. Teachers should limit task scaffolding, instead providing frameworks to support students to unpack the concepts independently, and to gather and synthesise meaning from the data independently, to support the development of unique student responses (General and Alternative Sequence)
- the justification pertaining to the course of action is supported by primary and secondary data (General and Alternative Sequence).

Additional advice

- Ensure that teacher annotations and highlighting on the ISMG does not impact a confirmer's ability to read and match characteristics within the student response (General and Alternative Sequence).
- Teachers are encouraged to highlight the matched characteristics in the ISMG to the student work rather than merely circling a numerical result (General and Alternative Sequence).
- The school's assessment policy regarding redaction is reflective of the *QCIA and QCE policy and procedures handbook*. When work exceeds assessment conditions, requiring redaction, the applied redaction processes should be clearly indicated on the ISMG (General and Alternative Sequence).

Internal assessment 3 (IA3)

Project — folio (30%)

This assessment focuses on an inquiry process that requires the application of a range of cognitive and technical processes and skills, and conceptual understandings. Students document the iterative process of demonstrating and applying conceptual understandings through the psychomotor domain to devise a personal training strategy. Students evaluate the effectiveness of the personal training strategy and movement strategies and justify using primary and secondary data. The multimodal response is a coherent work that includes visual, written and/or spoken modes.

Assessment design

Validity

Validity in assessment design considers the extent to which an assessment item accurately measures what it is intended to measure and that the evidence of student learning collected from an assessment can be legitimately used for the purpose specified in the syllabus.

Reasons for non-endorsement by priority of assessment

Validity priority	Number of times priority was identified in decisions*
Alignment	138
Authentication	10
Authenticity	9
Item construction	24
Scope and scale	12

*Each priority might contain up to four assessment practices.

Total number of submissions: 370.

Effective practices

Validity priorities were effectively demonstrated in assessment instruments that:

- accurately replicated the syllabus specifications in the task, providing clear instructions that informed students about the processes and elements required to complete the response, without leading students to a pre-determined response or repeating cognitions
- featured authentication strategies reflecting QCAA guidelines for assuring student authorship
- provided appropriate information in line with syllabus conditions about the scale of knowledge and skills students are required to demonstrate when completing the task.

Practices to strengthen

It is recommended that assessment instruments:

- clearly state that students will focus on the specialised movement sequences for one movement strategy to devise a personal training strategy, rather than specifying a principle of play and potentially narrowing the task
- match the syllabus specifications. Concise and consistent specifications are essential to clarify what is required in the development of a training strategy within the folio, and the needs relating to the evaluation and justification of personal performance
- clearly specify the requirements of the supporting evidence assessment objectives 2 and 3. Consideration must be given to the physical activity context endorsed in IA1 to ensure schools meet the syllabus requirement. In Units 3 and 4, physical activities must be selected from different categories: one physical activity from either the 'Invasion' or 'Net and court' category in Unit 3: Topic 1; and one physical activity from the 'Invasion', 'Net and court' or 'Performance' category in Unit 4: Topic 1
- align the selected physical activity context to the prescribed categories and subject matter found within the syllabus.

Accessibility

Accessibility in assessment design ensures that no student or group of students is disadvantaged in their capacity to access an assessment.

Reasons for non-endorsement by priority of assessment

Accessibility priority	Number of times priority was identified in decisions*
Bias avoidance	0
Language	27
Layout	7
Transparency	13

*Each priority might contain up to four assessment practices.

Total number of submissions: 370.

Effective practices

Accessibility priorities were effectively demonstrated in assessment instruments that:

- used syllabus specifications to improve bias avoidance, language, layout and transparency
- featured assessment instruments that used appropriate language and avoided unnecessary jargon, specialist language, and colloquial language
- featured assessment instruments that were free of errors and modelled accurate spelling, grammar, punctuation, and other textual features.

Practices to strengthen

It is recommended that assessment instruments:

- avoid using bold, italics and other formatting features to alter specifications and make some specifications appear more important

- are free from errors in spelling, grammar and punctuation, and model the language and prescribed terminology of the syllabus.

Assessment decisions

Reliability

Reliability is a judgment about the measurements of assessment. It refers to the extent to which the results of assessments are consistent, replicable and free from error.

Agreement trends between provisional and confirmed marks

Criterion number	Criterion name	Percentage agreement with provisional	Percentage less than provisional	Percentage greater than provisional	Percentage both less and greater than provisional
1	Explaining	90.88%	8.84%	0.28%	0%
2	Demonstrating and applying	90.06%	6.63%	1.93%	1.38%
3	Analysing	90.33%	8.84%	0.55%	0.28%
4	Evaluating and justifying	85.91%	12.98%	1.1%	0%
5	Communicating	94.75%	4.42%	0.83%	0%

Effective practices

Accuracy and consistency of the application of the ISMG for this IA was most effective when:

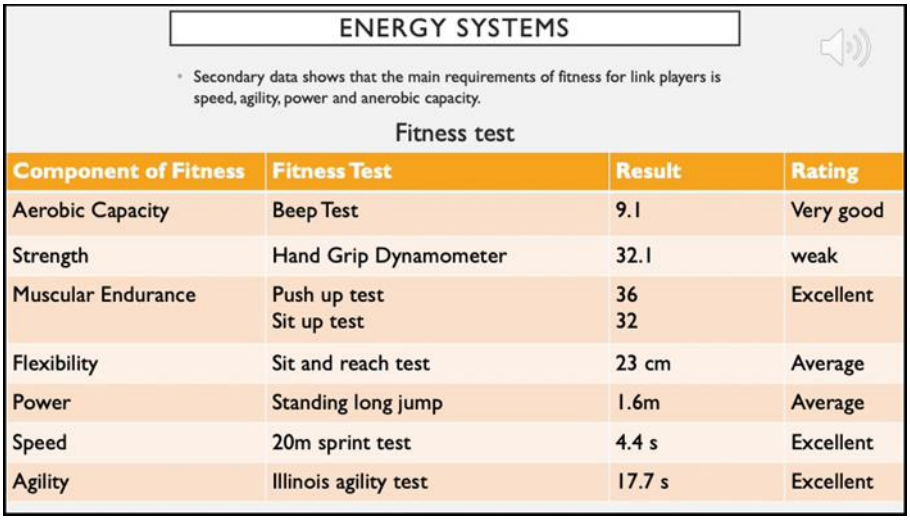
- the evaluation of personal performance informed the devised training strategy
- the evaluation of personal performance was located in the 9–11 minute multimodal and not in the 2–3 minutes of supporting evidence (General and Alternative Sequence)
- the evaluation regarding the effectiveness of the training strategy included appraisal of the outcome, implications, and limitations referring to the principles of training, training methods, energy systems and fitness components
- the physical activity context selected is listed in the syllabus, and the supporting evidence addressed the descriptions in the physical activity subject matter (General and Alternative Sequence)
- primary and secondary data was used in the processes of analysis, synthesis and justification (General and Alternative Sequence)
- consideration was given to the qualifiers in matching evidence to the characteristics in the demonstrating and applying ISMG (General and Alternative Sequence).

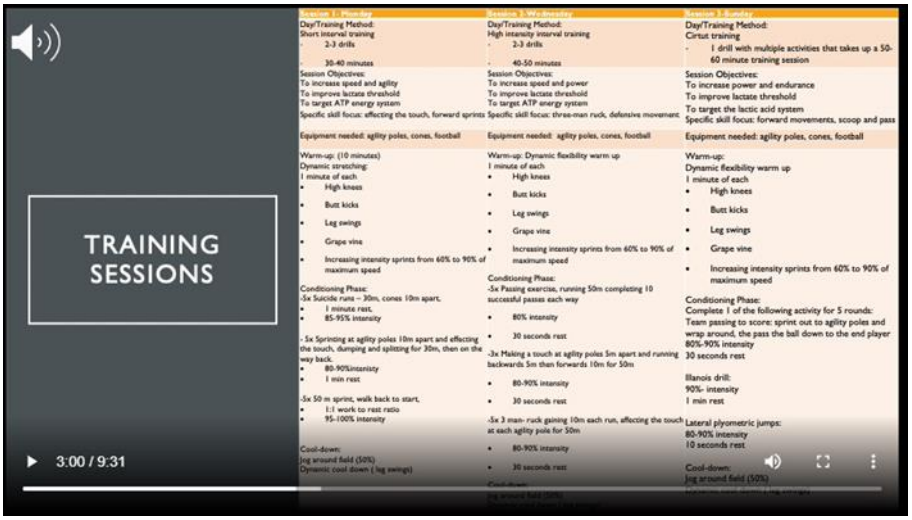
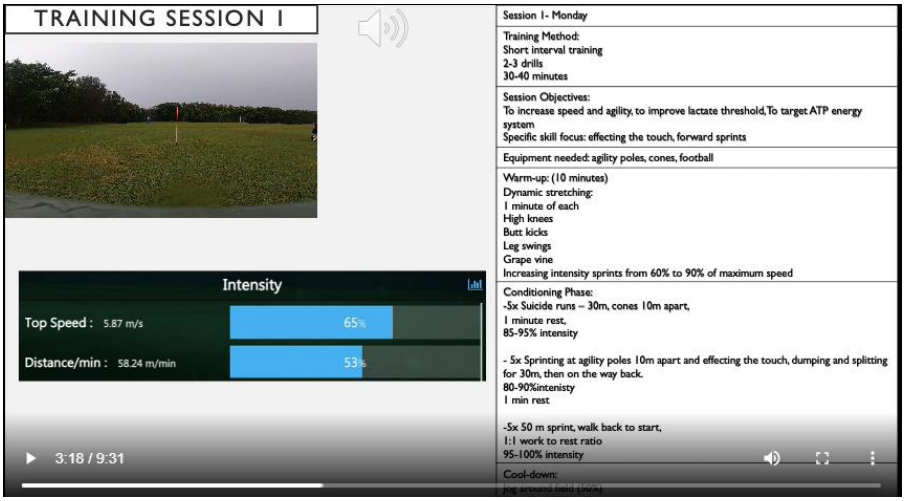
Samples of effective practices

The following are excerpts from a response that illustrates the characteristics for the criteria. The excerpts may provide evidence of more than one criterion. The characteristics identified may not be the only time the characteristics have occurred throughout a response.

These student response excerpts have been included:

- to demonstrate insightful analysis and discerning synthesis (using primary and secondary data) to ascertain the most significant relationships between the demands of the specialised movement sequences and movement strategy, relevant energy systems, and personal performance relating to the specified movement strategy
- to demonstrate critical evaluation of the effectiveness of the training strategy, using selected principles of training to appraise the outcomes, implications, and limitations of the selected training methods, energy systems and fitness components.

Analysing (4–5 marks)	**Excerpt 1**  Excerpt 1 video file (video, 29 sec) https://www.qcaa.qld.edu.au/curriculum-assessment/portal/media/snr_pe_19_ia3_sr_snip_1.mp4

Evaluating (7–8 marks)	**Excerpt 2**   Excerpt 2 (video, 3 min 6 sec) https://www.qcaa.qld.edu.au/curriculum-assessment/portal/media/snr_pe_19_ia3_sr_snip_2.mp4

Practices to strengthen

To further ensure accuracy and consistency of the application of the ISMG for this IA, it is recommended that:

- student work contains subject matter relevant to the outcome, implications, and limitations of the selected training methods, energy systems, and fitness components when students are evaluating the effectiveness of their training strategy
- the multimodal contains the mandatory visual features in conjunction with either written and/or spoken modes, as prescribed in the syllabus. Commonly, multimodal pieces use all modes, with each mode contributing significantly to the response, i.e. visual features throughout the folio; written text on slides or annotations; and a voice overlay that provides further elaboration of ideas. However, as specified in the *Confirmation submission information* document (see the QCAA Portal > Syllabus tile > Resources tab), scripts are not used in matching evidence to the ISMG and do not constitute engagement with the written mode (General and Alternative Sequence)
- evaluation of personal performance occurs in the 9–11 minute multimodal. Some submissions had evidence of ‘evaluation of performance’ in the supporting folio of 2–3 minutes of

demonstrating and applying evidence. It is imperative for the 9–11 minute multimodal to provide evidence of Objectives 1, 4, 5, 6 and 7 only, and for the supporting evidence (separate to the multimodal) of 2–3 minutes to provide evidence of Objectives 2 and 3 only. Ensure that students have a greater understanding of the relevance of, and process in, delivering the evaluation of personal performance in informing the training strategy design, implementation, and justification.

Additional advice

- Teachers are required to provide a physical activity context within the syllabus prescribed parameters. This is two different categories across Units 3 and 4: Unit 3 prescribed contexts within 'Net and court' and 'Invasion' categories; and Unit 4 prescribed contexts within 'Net and court', 'Invasion' and prescribed events/distances within the performance category.
- The school's assessment policy regarding redaction is reflective of the *QCIA and QCE policy and procedures handbook*. When work exceeds assessment conditions, requiring redaction, the applied redaction processes should be clearly indicated on the ISMG (General and Alternative Sequence).
- The submission of the supporting evidence (2–3 minute video folio) should be a separate MP4 file (as per confirmation submission information) that clearly and appropriately identifies the student. The supporting evidence provided should accurately reflect the school's provisional mark, showing evidence of the student performing multiple movement strategies within multiple principles of play. The supporting evidence should not contain commentary or distracting or inappropriate comments/music from behind the camera and should be within an authentic performance environment as per syllabus requirements, and not merely a demonstration of movement sequences or strategies in isolation (General and Alternative Sequence).

External assessment

External assessment (EA) is developed and marked by the QCAA. The external assessment for a subject is common to all schools and administered under the same conditions, at the same time, on the same day.

Examination — combination response (25%)

Assessment design

The General assessment instrument was designed using the specifications, conditions and assessment objectives described in the summative external assessment section of the syllabus. The General examination consisted of one paper:

- Section 1 consisted of multiple choice questions (10 marks)
- Section 2 consisted of short response questions (28 marks)
- Section 3 consisted of an extended response question (14 marks)

The General examination assessed subject matter from Unit 4. Questions were derived from the context of 'Energy, fitness and training' integrated with one selected 'Invasion', 'Net and court' or 'Performance' physical activity.

The General assessment required students to respond to ten multiple choice questions, two short response items and one extended response item.

The Alternative Sequence (AS) assessment instrument was designed using the specifications, conditions and assessment objectives described in the summative external assessment section of the AS. The AS examination consisted of one paper:

- Section 1 consisted of multiple-choice questions (10 marks)
- Section 2 consisted of short response questions (33 marks)
- Section 3 consisted of an extended response question (16 marks)

The AS examination assessed subject matter from AS unit 2. Questions were derived from the context of 'Motor learning, functional anatomy, biomechanics and physical activity'.

The AS assessment required students to respond to ten multiple choice questions, three short response items and one extended response item.

Assessment decisions

Assessment decisions are made by markers by matching student responses to the external assessment marking guide (EAMG). The external assessment papers and the EAMG are published in the year after they are administered.

General multiple choice item responses

There were 10 multiple choice items in Paper 1.

Percentage of student responses to each option

Note:

- The correct answer is **bold** and in a blue shaded table cell.
- Some students may not have responded to every question.

Question	A	B	C	D
1	27.31	19.02	28.06	**24.80**
2	**87.67**	5.24	1.33	5.29
3	1.78	**90.03**	5.31	2.41
4	13.49	**68.77**	13.09	4.07
5	0.93	1.74	**96.33**	0.52
6	10.28	1.67	**58.22**	29.26
7	**78.77**	5.02	13.40	2.29
8	29.33	5.98	28.35	**35.73**
9	6.52	13.88	**66.48**	12.43
10	**75.51**	13.50	0.48	9.88

AS multiple choice item responses

Percentage of student responses to each option

- The correct answer is **bold** and in a blue shaded table cell.
- Some students may not have responded to every question.

Question	A	B	C	D
1	**51.11**	9.33	18.22	20.00
2	20.89	**48.00**	23.11	7.11
3	4.00	11.56	**47.11**	36.00
4	6.22	10.67	**46.67**	35.56
5	16.44	18.67	**62.67**	0.89
6	**41.33**	29.33	17.78	10.67
7	14.22	**71.11**	8.00	5.78
8	14.22	0.89	**59.11**	24.89
9	1.78	36.00	25.33	**36.00**
10	6.22	7.56	12.89	**72.44**

Effective practices

Overall, students responded well to:

- assessment aspects requiring them to recognise and explain
- assessment aspects allowing synthesis, evaluation and justification of concepts relating to the optimising of movement strategies
- opportunities to demonstrate applied knowledge and understanding obtained through the integrated learnings within Unit 4 in the General and Unit 2 in the Alternative Sequence.

Samples of effective practices

Short response

General Question 11

This question required students to:

- analyse a provided stimulus in determining the reason for an athlete's declining performance, supporting their response using indicators from the stimulus
- devise modifications to optimise the athlete's performance for the remainder of the competition phase, justifying their suggested modifications with specific reference to three principles of training.

Effective student responses:

- determined that the athlete's performance was suffering due to the intensity and frequency of training within their competition phase
- accurately used the required number of indicators from the stimulus in supporting their determined cause of the athlete's decline in performance
- devised and justified modifications that optimised the athlete's performance for the remainder of the competition phase.

This student response excerpt has been included:

- to demonstrate the accurate determination that the athlete's performance was suffering due to the intensity and frequency of training within their competition phase
- to demonstrate accurate use of four indicators from the stimulus to support their response
- to demonstrate well-devised and justified suggested modifications, referring to three principles of training, (frequency, intensity and duration) and making direct links to the stimulus.

Accurate identification of the reason for declining performance, supported by the required indicators	**Excerpt 1** a) Identify the reason for the athlete's declining performance during the competition phase. Support your response with four indicators from the information. *[5 marks]* The athlete's performance is becoming increasingly worse over the competition as the athlete is overworking themselves and is not allowing themselves ^ enough time to fully recover. This ^ is indicated by the athlete's high intensity ^ effort and high level of exertion, without sufficient rest. Instead of resting the athlete completes fitness trainings instead. This does not allow for optimal recovery. Their decrease in performance is further noticeable in their body language, appearing fatigued and lethargic ^ on game days. Moreover, the athlete begins to make increasingly more errors which is indicative of fatigue and insufficient rest. Finally, the athlete proceeds to travel less distance in a game as the weeks go by, indicating that they are becoming increasingly tired, experiencing muscle soreness, and greater oxygen deficit.

Provides a detailed justification of how the modifications to the selected training principles address identified key indicators	**Excerpt 2** b) Devise modifications to optimise the athlete's performance in the remainder of the competition phase. Justify your modifications by referring to three principles of training. *[9 marks]* The athlete should already be at peak fitness before they enter the competition phase. Therefore the athlete should stop any additional fitness training as it is no longer useful. Rather this should be replaced with rest days where focus is placed on physical and mental recuperation. By including recovery this prevents or lessens the effects of reversibility, which ~~are~~ is currently being exhibited. This also reduces the frequency of training sessions, which is more desired at this level/stage in the competition. Furthermore, it is suggested that the athlete reduces their intensity in training sessions, ~~rather they~~ and instead work at around 75-85% of their max heart rate (MHR). Just training slightly above that lactate threshold, aims to reduce the accumulation of lactate, which takes 30-120 mins to remove after a session. Furthermore, the principle of individuality should be relied upon here, to ensure the athlete is not being held to the standards of possibly fitter / more experienced team members. Possibly the athlete could request greater rest time during trainings or games. Also, instead of targetting areas of fitness in such late stages of the competition, alternatively focus on skill-specific movements that replicate an authentic performance environment. This should in turn promote less errors during games.

AS Question 11

This question required students to:

- identify three factors that may act as rate limiters on the learning process of individuals
- provide examples from a physical activity context describing where the learning process has been affected, limiting performance.

Effective student responses:

- determined the factors that may act as rate limiters on the learning process of individuals, which are prescribed in the syllabus as technical, perceptual, tactical, physiological, psychological, and physical
- accurately provided three examples from a physical activity context with accurate descriptions of how each factor may affect performance in the learning process.

This student response excerpt has been included:

- to demonstrate the accurate determination of three factors that may act as rate limiters on the learning process of individuals as prescribed in the syllabus (tactical, physiological, psychological)
- to demonstrate three examples from a physical activity context that accurately describe how each factor may affect performance in the learning process (tactical — long jump, physiological — 100m sprint, psychological — volleyball).

Accurate determination of three factors	**Excerpt 1** **QUESTION 11 (9 marks)** a) Identify three factors that act as rate limiters on the learning processes of an individual. *[3 marks]* 1. Psychological factors 2. Tactical factors 3. Physiological factors

Accurate provision/description of three examples from a physical activity context	**Excerpt 2** b) For each factor identified in Question 11a), provide an example from a physical activity context describing where the learning process has been affected, limiting performance. *[6 marks]* Psychological rate limiters are associated with an athletes mental. An example of a psychological state during or before a game. An example of a psychological rate limiter in a volleyball context is decreased motivation and concentration that causes a decrease in attention to feedback or cues, therefore limiting optimal performance. Tactical rate limiters are associated with an athlete's ability to manipulate aspects of the game or competition to gain an advantage. In a long-jump context an athlete may be limited to learning efficiently if they do not understand the rules or how to gain an advantage based off your position in the competition, therefore limiting performance. Physiological factors relate to an athlete's genetic make-up. In a ~~cross~~ 100 metre race context an athlete with a worst established ATP-PC system will be limited to learn and extend, therefore hindering performance.

General Question 12

This question required students to:

- analyse a provided stimulus in determining the variation of interval training in the session design, supporting their judgment with evidence from the stimulus
- evaluate how effectively the training session targeted the energy and fitness requirements of a physical activity context engaged with during Unit 4
- justify the maintenance or modification of this variation of interval training in meeting the specific energy and fitness requirements of their selected physical activity context.

Effective student responses:

- determined that the variation of interval training was Aerobic Interval Training (AIT), supporting their judgment with evidence from the stimulus
- critically evaluated the effectiveness of AIT in targeting the specific energy and fitness requirements of the selected physical activity
- provided discerning justification of the maintenance or modification of the training session in targeting the specific energy and fitness requirements of the selected physical activity, demonstrating insightful use of examples.

This student response excerpt has been included:

- to demonstrate the accurate determination of the variation as Aerobic interval Training (AIT)

- to demonstrate critical evaluation of the effectiveness of AIT in targeting the specific energy and fitness requirements of touch football.

Determines that the interval training variation is aerobic interval training, using a feature from the stimulus to support the response	**Excerpt 1** a) Determine the variation of interval training evident in the training session design. Support your response with an example from the training session. *[2 marks]* This training session utilises aerobic interval training (AIT) as shown by the low to moderate intensity (50-80% MHR) and the little rest consistent with this aerobic style interval training.
Provides a critical evaluation of the effectiveness of aerobic interval training in targeting the specific energy and fitness requirements of the selected physical activity	**Excerpt 2** Selected physical activity (and position, if applicable): Touch Football This training session would be ineffective in targeting the specific energy and fitness requirements of touch football. Touch football requires use from predominantly the ATP-PC energy system. This training session however, targets almost entirely the aerobic system, as shown by the low to moderate intensity (50-80% MHR) and the little rest. While the aerobic system is somewhat relevant in touch football (for recovery of the ATP-PC system through the aerobic system's role in replenishing PC stores), it certainly should not be the primary focus in training. In addition, touch football makes use of speed, agility, coordination and power (for acceleration) as the main components of fitness. None of these important components of fitness are targeted in the training session, which instead targets aerobic capacity as the primary component of fitness. This is not one of

AS Question 12

This question required students to:

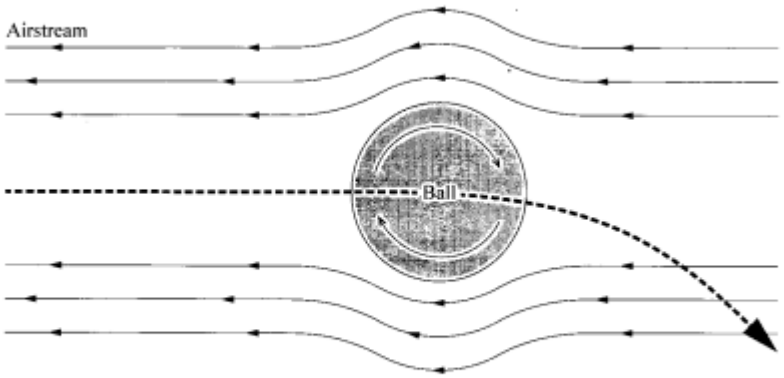
- explain Bernoulli's principle with reference to a provided stimulus
- explain (using the Bernoulli principle) the deliberate manipulation of movement in achieving a desired performance outcome.

Effective student responses:

- provided appropriate explanation of Bernoulli's principle
- used accurate features from the provided stimulus to support the explanation
- provided an explanation of the deliberate manipulation of movement to achieve a desired performance outcome in a suitable specialised movement sequence

This student response excerpt has been included:

- to demonstrate appropriate explanation of Bernoulli's principle
- to demonstrate accurate recognition and discerning use of features from the stimulus
- to show discerning explanation of the deliberate manipulation of movement to achieve a desired performance outcome in tennis.

Appropriate explanation of Bernoulli's principle and use of features from the stimulus	**Excerpt 1** **QUESTION 12 (12 marks)**  a) Explain Bernoulli's principle with reference to features in the diagram. *[6 marks]* Bernoulli's principle relates to the trajectory & and horizontal motion of an object based on the magnus effect and other properties of motion through air. The diagram shows a ball that travels forward and rapidly drops through the air as it travels. This line of motion can be explained due to the ball having topspin as it travels. As the airstream is acting in an opposing direction to the direction of movement of the ball's top half, a large area of pressure is created above the ball. As the airstream ~~in the same direction~~ acts in the same direction as the ball's bottom half, a small pressure of air is created below the ball. This low pressure is overcome due to the large pressure above the ball, which combines to create the 'See page 12'

Explanation of the deliberate manipulation of movement to achieve a desired performance outcome in tennis	**Excerpt 2** ~~An~~ object that is thrown at an acute angle will or games involving balls such as tennis. An important specialised movement sequence in a game of ~~tem~~ tennis is a forehand shot. Understanding Bernoulli's principle is important for an athlete to optimise performance and achieve a desired outcome such as controlling the position ~~of the~~ and direction of the ball. Manipulation during the game can occur by the amount of top spin an athlete applies to the ball. No top spin would make the ball travel straight with a slow decent and regular angle of bounce, moderate top spin would enable a small downwards motion and decreased angle of bounce and large top spin would enable a greater forceful hit that exponentially drops and ~~bounced at a very low accelerated angle~~ bounces at a very low accelerated angular motion. 'See page 12' This purposeful manipulation of a forehand shot relies on understanding the properties of Bernoulli's principle and applying them to desireably improve performance and ability to control a game. This will optimise an athlete's performance.

Extended response

General Question 13

This question required students to:

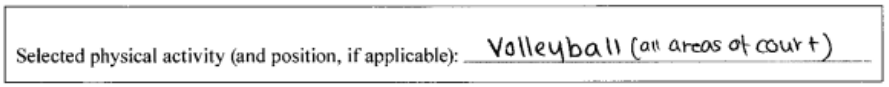
- analyse position specific or event specific components of fitness relevant to optimal performance in a selected physical activity. Using this appraisal, students were required to make a judgment on the two most important components of fitness relevant to the selected physical activity context
- devise a two session micro-cycle to optimise performance in a relevant movement sequence in the selected physical activity context.
- justify their decisions related to the selected principles of training, training methods and recovery principles used within the devised micro-cycle.

Effective student responses:

- provided a discerning analysis of the relevant components of fitness for the selected physical activity, demonstrating discerning links to the selected position or event requirements in determining the two most important components of fitness
- included a relevant two-session micro-cycle, explaining the training sessions using discerning links to one specialised movement sequence in the selected physical activity context
- displayed discerning justification of the selected training methods, principles of training and recovery principles in optimising performance; demonstrated insightful use of evidence from the devised micro-cycle to support how the selected training methods, principles of training, and recovery principles optimise performance, and made discerning links to one specialised movement sequence in the physical activity context.

This student response excerpt has been included:

- to demonstrate a discerning analysis of the relevant components of fitness for volleyball, demonstrating discerning links to the selected position or event requirements in determining the two most important components of fitness (power and agility)
- to provide a discerning justification of the selected training methods, principles of training, and recovery principles in optimising performance
- to demonstrate insightful use of evidence from the devised micro-cycle to support how the selected training methods, principles of training, and recovery principles optimise performance.

Analysing components of fitness	**Excerpt 1**
• provides a discerning analysis of the relevant components of fitness determining the two most important • links to the position or event requirements	 Selected physical activity (and position, if applicable): Volleyball (all areas of court) The net and court sport of volleyball incorporates many position and event specific components of fitness to optimise performance through successful and effective movement strategies and sequences. These fitness components include, agility and speed, to ensure a player is able to get into the correct position and body position, fast enough to effectively hit the ball in the use of front-court and back-court setters, or when looking to spike a ball and force opposition to use non-attacking hit. Additionally, effective volleyball play is also significantly reliant on power and strength to ensure in any digs, sets, spikes or types of serves including under or over arm are able to be hit over the

• determines the two most important components of fitness	**Excerpt 1 (continued)** net with power to score a point, and further to ensure arms are stable enough and a player is able to jump high enough to block opposition attack in single, double or triple blocking. From these, the most critical fitness components involved in optimal volleyball game play include power, particularly in the leg muscle groups to ensure maximum height over the ball to spike and block, and agility, to ensure in on-ball and off-ball movements, a player is able to get into the correct court and body position effectively. As such, a two session microcycle has been devised to optimise performance in the core, relevant specialised movement ~~strategy~~ sequence of defending against attack, primarily in blocking with double, single or triple block, which utilises both agility and power.

Justification of the selected training methods, principles of training and recovery principles

- provides justification of the selected training methods, principles of training and recovery principles in optimising performance
- demonstrates use of evidence from the devised micro-cycle to support how the selected training methods, principles of training and recovery principles optimise performance

Excerpt 2

focus on both core fitness components to volleyball and the movement sequence of ~~attacking~~ defending against opposition attack through blocking, the movement sequence is able to be optimised, through training greater power in jumps, and greater ~~speed~~ agility in running to and along the net to block and getting into positioning, thus able to optimise overall performance.

The application of training methods including circuit and plyometrics actively ensure focus on the ~~main~~ fitness components and variation in exercises. For instance the use of plyometric, high impact exercises in a circuit template for power ensured an optimal focus on power, and its explosive use in a volleyball game in jumping to block and spike. Further in both the agility and power sessions, the use of a circuit meant ~~exercis~~ multiple exercises where able to be incorporated, including those specific to the sport with incorporation of equipment including the ball and the net, as seen in the power circuit as not use: run and block. Further, the use of a circuit training method

also ensures the sessions are able to be further adapted to the sport through a work to rest ration of 1:3, ensuring greater rest periods than work, as seen in many exercises being 10s on and 30s off. Additionally, the rotational abilities of a circuit session also ensure not one muscle group is overworked through sharing the load, with the power session incorporating a leg-arm rotation throughout

AS Question 14

This question required students to:

- analyse a provided case study to identify examples limiting the progression of this learner
- suggest modifications to better meet the needs of the learner and improve their practice environment
- justify the modifications by considering the features of this stage of learning, practice methods and types of feedback.

Effective student responses:

- identified examples of what may limit learner progress from the case study
- provided a justification of modifications to practice methods to optimise the learning environment
- provided a justification of modifications to feedback types to optimise the learning environment
- provided use of evidence from the case study to support the response making links to the features of the cognitive stage of skill acquisition.

This student response excerpt has been included to demonstrate the identification of features from the case study and an insight to the transition into addressing the suggested modifications aimed at enhancing the learning environment.

Identification of features in the case study limiting learner progress	**Excerpt 1** This learner is unable to progress through the stages of the ~~dynamic systems~~ Fitts and Posner's model of motor learning due to a large combination of rate limits and other limiting factors. The case study reveals that the learner does not advance ~~his~~ in learning when revealed to an open authentic game environment, due to the inability to utilise movement sequences, a state of confusing and the inability to problem solve. The learner also can be suggested to have poor perception-action

- provides justification of suggested modifications to optimise the learning environment

Excerpt 1 (continued)

coupling abilities and this also explains decrease success in the repetative, adaptable style practices. ~~These are all facto~~ The case study also reveals the learner struggles with external feedback that is given in large groups. These are all factors that can be overcome to enable the learner to advance to the associative stage of learning by modifying the practices and feedback approaches. These modifications could include the coach implementing a combination of part and ~~distot~~ distributed practices. Part practice would enable the learner to develop the finer ~~sch~~ skills of vital movement strategies and distributed practice

- makes links to the features of the cognitive stage of skill acquisition

Excerpt 2

based environment. The coach should try give more attentive, personal 1 on 1 feedback to the learner as the learner does not learn effectively by group feedback. These minor variations in practice and feedback would help eliminate the learner's limiting

factors, enabling them to proceed in learning. These modifications can be justified by the characteristics of a cognitive learner. A cognitive learner relies on putting simple actions together, can not perceive information well, has disjointed practice and relies on feedback from external and internal forces. ~~The learner~~

Practices to strengthen

It is recommended that when preparing students for external assessment, teachers consider:

- extensive exposure to the syllabus prescribed subject matter, making specific reference to the terminology, areas of study and specified examples (General and Alternative Sequence)
- opportunities to practise the dissection and analysis of stimulus to ascertain relationships, features, components and the synthesis of meaning to demonstrate deep knowledge and understanding of the application of subject matter prescribed concepts (General and Alternative Sequence)
- improving exposure to opportunities to develop skills in assessment literacy
- developing the skills to read carefully and purposefully plan and organise a written response that acknowledges the required cognitive elements and essential subject matter required by the question parameters (General and Alternative Sequence)
- reinforcing the need for students to read each presented option in a multiple choice item.