GradeMax

CAMBRIDGE
International Education

Cambridge International AS & A Level

PSYCHOLOGY **9990/22**

Paper 2 Research Methods **October/November 2025**

MARK SCHEME

Maximum Mark: 60

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge International will not enter into discussions about these mark schemes.

Cambridge International is publishing the mark schemes for the October/November 2025 series for most Cambridge IGCSE, Cambridge International A and AS Level components, and some Cambridge O Level components.

© Cambridge University Press & Assessment 2025

GradeMax

PUBLISHED

Generic Marking Principles

These general marking principles must be applied by all examiners when marking candidate answers. They should be applied alongside the specific content of the mark scheme or generic level descriptions for a question. Each question paper and mark scheme will also comply with these marking principles.

GENERIC MARKING PRINCIPLE 1:

Marks must be awarded in line with:

- the specific content of the mark scheme or the generic level descriptors for the question
- the specific skills defined in the mark scheme or in the generic level descriptors for the question
- the standard of response required by a candidate as exemplified by the standardisation scripts.

GENERIC MARKING PRINCIPLE 2:

Marks awarded are always **whole marks** (not half marks, or other fractions).

GENERIC MARKING PRINCIPLE 3:

Marks must be awarded **positively**:

- marks are awarded for correct/valid answers, as defined in the mark scheme. However, credit is given for valid answers which go beyond the scope of the syllabus and mark scheme, referring to your Team Leader as appropriate
- marks are awarded when candidates clearly demonstrate what they know and can do
- marks are not deducted for errors
- marks are not deducted for omissions
- answers should only be judged on the quality of spelling, punctuation and grammar when these features are specifically assessed by the question as indicated by the mark scheme. The meaning, however, should be unambiguous.

GENERIC MARKING PRINCIPLE 4:

Rules must be applied consistently, e.g. in situations where candidates have not followed instructions or in the application of generic level descriptors.

© Cambridge University Press & Assessment 2025

GradeMax

GENERIC MARKING PRINCIPLE 5: Marks should be awarded using the full range of marks defined in the mark scheme for the question (however; the use of the full mark range may be limited according to the quality of the candidate responses seen).
GENERIC MARKING PRINCIPLE 6: Marks awarded are based solely on the requirements as defined in the mark scheme. Marks should not be awarded with grade thresholds or grade descriptors in mind.

© Cambridge University Press & Assessment 2025

GradeMax

PUBLISHED

Social Science-Specific Marking Principles
(for point-based marking)

1 Components using point-based marking:

- Point marking is often used to reward knowledge, understanding and application of skills. We give credit where the candidate's answer shows relevant knowledge, understanding and application of skills in answering the question. We do not give credit where the answer shows confusion.

From this it follows that we:

a DO credit answers which are worded differently from the mark scheme if they clearly convey the same meaning (unless the mark scheme requires a specific term)
b DO credit alternative answers/examples which are not written in the mark scheme if they are correct
c DO credit answers where candidates give more than one correct answer in one prompt/numbered/scaffolded space where extended writing is required rather than list-type answers. For example, questions that require *n* reasons (e.g. State two reasons …).
d DO NOT credit answers simply for using a 'key term' unless that is all that is required. (Check for evidence it is understood and not used wrongly.)
e DO NOT credit answers which are obviously self-contradicting or trying to cover all possibilities
f DO NOT give further credit for what is effectively repetition of a correct point already credited unless the language itself is being tested. This applies equally to 'mirror statements' (i.e. polluted/not polluted).
g DO NOT require spellings to be correct, unless this is part of the test. However spellings of syllabus terms must allow for clear and unambiguous separation from other syllabus terms with which they may be confused (e.g. Corrasion/Corrosion)

2 Presentation of mark scheme:

- Slashes (/) or the word 'or' separate alternative ways of making the same point.
- Semi colons (;) bullet points (•) or figures in brackets (1) separate different points.
- Content in the answer column in brackets is for examiner information/context to clarify the marking but is not required to earn the mark (except Accounting syllabuses where they indicate negative numbers).

© Cambridge University Press & Assessment 2025

GradeMax

3 Calculation questions:

- The mark scheme will show the steps in the most likely correct method(s), the mark for each step, the correct answer(s) and the mark for each answer
- If working/explanation is considered essential for full credit, this will be indicated in the question paper and in the mark scheme. In all other instances, the correct answer to a calculation should be given full credit, even if no supporting working is shown.
- Where the candidate uses a valid method which is not covered by the mark scheme, award equivalent marks for reaching equivalent stages.
- Where an answer makes use of a candidate's own incorrect figure from previous working, the 'own figure rule' applies: full marks will be given if a correct and complete method is used. Further guidance will be included in the mark scheme where necessary and any exceptions to this general principle will be noted.

4 Annotation:

- For point marking, ticks can be used to indicate correct answers and crosses can be used to indicate wrong answers. There is no direct relationship between ticks and marks. Ticks have no defined meaning for levels of response marking.
- For levels of response marking, the level awarded should be annotated on the script.
- Other annotations will be used by examiners as agreed during standardisation, and the meaning will be understood by all examiners who marked that paper.

© Cambridge University Press & Assessment 2025

GradeMax

Annotations guidance for centres

Examiners use a system of annotations as a shorthand for communicating their marking decisions to one another. Examiners are trained during the standardisation process on how and when to use annotations. The purpose of annotations is to inform the standardisation and monitoring processes and guide the supervising examiners when they are checking the work of examiners within their team. The meaning of annotations and how they are used is specific to each component and is understood by all examiners who mark the component.

We publish annotations in our mark schemes to help centres understand the annotations they may see on copies of scripts. Note that there may not be a direct correlation between the number of annotations on a script and the mark awarded. Similarly, the use of an annotation may not be an indication of the quality of the response.

The annotations listed below were available to examiners marking this component in this series.

Annotations

Annotation	Meaning
	Correct point
	Incorrect point
BOD	Benefit of doubt
REP	Repetition (of stem or within response)
	Unclear point
GM	Generic mark
L1 L2 L3 L4 L5	Used to show Level 1, 2, 3, 4, or 5 in the 10-mark planning Q
NAQ	Not answering question

© Cambridge University Press & Assessment 2025

GradeMax

Annotation	Meaning
SEEN	Acknowledge blank pages
^	Something is missing
a b c d	Used for each point of description of a required feature in the 10-mark planning Q

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
1(a)	**Outline what is meant the term 'fatigue effect'.** Outline = 1 • **Poor performance** due to repetition; • **Worse scores/performance declines** due to boredom;	**1**
1(b)	**Suggest one fatigue effect that could have occurred in the study by Hölzel et al. (mindfulness and brain scans).** Linked suggestion = 1 • Bored with **mindfulness** exercises (and stopped / not try as hard); • Stopped doing the homework (before end of study);	**1**

Question	Answer	Marks
2	**Data can be qualitative or quantitative.**	
2(a)	**Outline what is meant by 'qualitative data'.** Outline = 1 • Data that is descriptive / in depth / detailed / gives insight;	**1**

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
2(b)	**Describe the qualitative data that was collected from <u>one</u> of the following studies:** • **Milgram (obedience)** • **Piliavin et al. (subway Samaritans).** Identification of qualitative data from Milgram/Piliavin = 1 Detail/second ID = 1 (example of comments, how data used) ***Milgram*:** • What people said about feelings when shocked; (ID) • How people reacted (verbally) when they shocked the learner (ID) • What people said after about (not) regretting having participated; (ID) • For example, "I do not think this is humane" (detail/example) ***Piliavin*:** • Comments people made about the victims; (identification) • Saying they were scared of the drunk/that they were not strong enough to help; (detail)	**2**

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
3	**In the study by Fagen et al. (elephant learning) behaviours such as 'trunk here', 'trunk up' and 'bucket' were recorded using a structured observation.** **Explain <u>one</u> strength of using a structured observation in this study.** Strength = 1 (generic or linked) Detail = 1 (generic or linked) The response **<u>must be linked</u>** at least **once (either in the strength or detail)** to earn full credit (2 marks) ***Improved reliability*** *(inter or intra-observer); (generic strength)* • As observations such as the two trunk positions can be compared to ensure that both agreed (linked detail) *Observers would not **get distracted** by the elephant's other behaviour/only focus on the elephant behaviours that are **relevant** to the study; (linked strength)* • Making the observations more valid; (generic detail)	**2**

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
4	**In the study by Pozzulo et al. (line-ups):**	
4(a)	**There was a sample of children and a sample of adults. In both samples there were some males and some females. Suggest why it was important that <u>both</u> males and females were present in <u>both</u> samples.** Suggestion for why both **genders** = 1 Detail / suggestion for why both groups = 1 **Suggestions** • Males and females might differ in their recall/ response to social factors / knowledge of cartoons; (suggestion for both genders) • It could hide the effect of age / difference between adults and children (if there were more/less males/females in one group); (why both groups) • It will mean that you are able to generalise **to males and females**" **Detail** • This would be a confounding factor / would affect the DV; (detail) • As males and females may react differently to the situation (and therefore you need to have both to ensure that is measured/can apply the results to both) (detail)	**2**
4(b)	**The standard deviation for the age of the adults was larger than the standard deviation for the age of the children.**	
4(b)(i)	**Describe what is meant by a 'standard deviation'.** Basic outline = 1 Detail = 1 **<u>No link to the study needed for full marks.</u>** • A measure of spread / variation / dispersion = 1 • (calculated as) the (average) difference from the **<u>mean</u>** = 1 • A measure a **spread/variation** (looking at difference) from the **mean** = 2	**2**

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
4(b)(ii)	**Explain <u>one</u> reason why the standard deviation for the age of the adults was larger than the standard deviation for the age of the children.** Simple explanation = 1 Detailed explanation = 2 There **<u>must be a link</u>** for full marks • The **spread of age** in the adults was greater than the spread in children; (explanation) • Because the children had to be young, so aged **<u>4–7,</u>** whereas there are decades of adulthood; (justification)	**2**

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
5	**Describe semi-structured interviews and unstructured interviews, using any example(s).** 1 mark for each definition/point of detail, up to a maximum of 2 for each term/concept. 1 mark for each example, max 2 for each term/concept. Examples can include examples from any studies (core studies, other studies, candidate's own studies). Max 4 if no examples or if only about one term/concept. Only 1 example needed to access 6 marks. ***interviews*** *generally:* • self-report / a way to ask the participant questions directly; • face-to-face/ telephone/ real time; • can include open **and** closed questions (can be credited only once in response); • **Milgram** used interviews to debrief his participants after the main study had finished. • **Pozzulo et al.** used interviews with the children. ***semi-structured:*** • interviews follow some set/fixed questions; • the interviewer can add some questions in response to the participant's responses; • can include open **and** closed questions (can be credited only once in the response); Examples • e.g. **Dement and Kleitman** used a semi-structured interview when asking participants a fixed question about whether they dreamed or not **= 1** (brief example) • **Dement & Kleitman** asked all Ps whether they had had a dream and if they did, they would follow up and ask them more questions about each dream **= 2** (detailed example) • **Saavedra and Silverman** used interviews with both the boy and his mother **= 1** (brief example) • **Saavedra and Silverman** used interviews with both the boy and his mother to ensure that the boy met the criteria for a diagnosis with a specific phobia **= 2** (detailed example) ***unstructured:*** • interview does not have set questions; • questions follow on from participant's answers; • so, the interviewer can pursue lines of interest/thought; • can include open **and** closed questions (can be credited only once in the response); • **Saavedra and Silverman** asked the boy and mother about stressful life events that may have triggered the onset of the phobia.	**6**

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
6	**Dr Raj is conducting a case study to investigate an elderly man, who he refers to as 'Mr J', who has an exceptional memory.**	
6(a)	**Dr Raj is considering the ethics of his study.**	
6(a)(i)	**Explain <u>one</u> ethical reason Dr Raj refers to his participant as Mr J.** Reason: **confidentiality** = 1 [definitive] **<u>Linked</u>** explanation of reason = 1 confidentiality; (guideline) • Because **<u>Mr J/the elderly man</u>** should not be identifiable; (link) • His **memories** might make him recognisable; (link)	**2**
6(a)(ii)	**Mr J can recall most of his life events, including negative ones.** **Explain the ethical guideline Dr Raj should follow when studying Mr J because he can remember negative life events.** Reason: Protection from (psychological) harm = 1 **<u>Linked</u>** explanation/detail of reason = 1 Protection from (psychological) harm; (guideline) • Because negative events are distressing; (linked detail) • Mr J may become upset by his negative memories; (linked detail) Right to withdraw (guideline) • Because if he feels uncomfortable talking about negative events he can choose to leave (linked detail) Privacy (guideline) • Because negative life events may be very personal and he may not want to disclose them (linked detail)	**2**

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
6(b)	**Dr Raj wants to triangulate his data.** **Explain what is meant by triangulation, using Dr Raj's study as an example.** Explanation (generic/linked) = 1 Detail/link = 1 To get 2 marks there **must be a link** to the study. Using **more than one** technique to collect data (can be both between or within methods); (explanation) • To check Dr Raj gets the same findings about memory; (link) • Dr Raj could use interviews and a questionnaire; (link) • Dr Raj could use a questionnaire and then use open questions to gain qualitative data and also ranked-scale questions to gain qualitative data	**2**
6(c)	**Explain two weaknesses of case studies.** Explanation = 1 [×**2**] Detail (may be linked or generic) = 1 [×**2**] *One participant so **low generalisability** of findings; (weakness)* • Especially as they tend to focus on rare instances; (generic detail) • As case studies tend to be of one person/group (who have unique characteristics) (generic detail) • Not even all exceptional people will be the same as Mr J; (linked detail) *Researcher gets to know participant well/forms an **attachment** with the participant (weakness)* • This may lead to the researcher writing down responses that make the participant 'look good'/ignoring any wrong answers the participants give (generic detail) *After working with them intensely, participants will get to know the researcher well/like the researcher leading to high **social desirability**; (weakness)* • The P tries to 'look good' as the researcher's opinion will matter to them; (linked detail) *As the study is in depth the participant may get to know a lot about study; (weakness)* • This may lead to demand characteristics such as Mr J trying really hard to remember; (linked detail) Ethical issues are also creditworthy i.e. distress/confidentiality/ right to withdraw	**4**

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
7	**Lorna has noticed that children often talk to their toys. She thinks this may be related to the children's vocabulary size (how many words they know). Lorna is planning a correlational study to investigate whether there is a relationship between how often a child talks to their toys and the child's vocabulary size.**	
7(a)	**Suggest <u>one</u> way that Lorna could measure a child's vocabulary size.** Way to measure vocabulary size = 1 • **Observe/ *count*** different words used; • Observe /***how many/frequency*** different words used (in 1 hour); • ***Count number*** *of* different words used in school exercise book; • Listen to them talking, **count *how*** *many* different words used;	**1**
7(b)	**Lorna must ask the children and their parents/guardians for consent to participate in her study.**	
7(b)(i)	**Explain why it is important to ask <u>both</u> the children and their parents/guardians for consent in this study.** Explanation = 1 (**understand** study AND **agree**) **Link to both children and parents** (likely to be partly implicit) = 1 *Consent allows participants to (have enough information to)* ***understand*** *the study and* ***agree*** *to it; (explanation*) • (Parents must agree as) children cannot give valid consent; (link) • As children can't fully understand / too young (so need parents too); (link)	**2**

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
7(b)(ii)	**Suggest <u>one</u> suitable way that Lorna could ask for consent from the children.** Suggestion of a child friendly generic request/question asking for **<u>consent</u>** = 1 Suggestion of a child friendly way of asking for consent **<u>linked</u>** to the study = 2 • Asking them if they agree to join/take part in a study using simple language (generic suggestion) = 1 • Asking them if they agree to join/take part in a study (generic suggestion) and then show them a child friendly video about what they will be doing with the **toys/words** (linked detail) = 2 • Will you come and talk to me for a while then play with the toys?' (linked suggestion) = 2 • **Would you like** to come and play a game word game with me and my **toys**? (linked suggestion) = 2 • Lorna could show them a child friendly video with children playing happily with **toys** and then ask them if they agree to do the same = 2	**2**
7(c)	**Lorna finds a positive correlation. She concludes that vocabulary size in children is increased by talking to toys more often.** **Explain why this conclusion is <u>not</u> correct.** Generic/linked Explanation = 1 Generic/linked detail = 1 (response must be linked at least once for full 2 marks) *She cannot say it is a causal relationship; (generic explanation)* • Therefore, she could only conclude that vocabulary size and number of toys **are related**; (linked detail) A *third factor could affect both vocabulary and talking play; (linked explanation /detail)* • e.g. parenting could affect both vocabulary and talking play; (linked detail)	**2**

Question	Answer	Marks
8	**Dr Chand is going to measure how much adults want to participate in social activities, such as team sports or attending a festival.**	

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
8(a)	**Dr Chand wants to collect <u>quantitative</u> data about how much adults want to participate in social activities. He can use the methods of questionnaires or interviews.** **Suggest <u>two</u> ways that Dr Chand could collect this data using one or both of these methods.** **1. …** **2. …** Suggestion = 1 [×**2**] Answer does **not** have to produce a score out of 15 to earn credit, the 'total' in the Q could be a composite score. • A (closed) question 'How likely are you join in social activities, on a scale (of 0 (I wouldn't) to 15 (I definitely would)'); • An (open) question 'Describe how much you like or dislike joining in with social activities' and score the answer (on a scale of 1–15);	**2**
8(b)	**For <u>one</u> of the ways of collecting data you suggested in part <u>(a)</u>:**	

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
8(b)(i)	**'Explain <u>one</u> way this method of collecting data is valid.** Strength = 1 Detail = 1 *Questionnaire:* *Can be done online/through the post (strength);* • Therefore, if they are embarrassed about not joining in, they may be more honest (detail); • unlike interviews which may be face to face and subject to social desirability bias (leading to less honest answers) (comparative detail) *Interview:* *Can explain the nature of the question if the participant does not understand (strength);* • whereas a questionnaire can only help with general printed instructions (leading to answers not related to the aim) (comparative detail) • means that the response given will be directly related to the question asked/the information the researcher wants to find out (detail). *Closed Q:* *Quantitative data is achieved so easy to analyse/is more objective; (strength)* • Can just produce a score that can be averaged/comparisons can be made between different groups i.e. ages (detail) • meaning it is not subject to researcher bias or interpretation (lowering validity); (detail) *Open Q*: *Allows opportunity to give individual/detailed responses; (strength)* • So, people with different reasons/feelings can express themselves more allowing a greater insight into their feelings; (detail)	**2**

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
8(b)(ii)	**Explain <u>one</u> way this method of collecting data is not valid.** Weakness = 1 Detail = 1 *Questionnaire:* *Ps may not understand the questions being asked (weakness);* • Whereas an interviewer would be able to explain (comparative detail) • meaning that the responses given may not be directly related to the question asked (general detail); *Interview:* *If the interview is face to face the Ps might lie/may give socially desirable answers (weakness);* • e.g. as they many want to appear more sociable as they feel this is more socially acceptable; • *Closed Q:* *Limits responses (to a number/to fixed choices); (weakness)* • Ps may want to say 'in situation X I would be willing'; (detail) • Meaning that the questionnaire answers may not have the choice that is more relevant to the desired answer for the participant (detail) *Open Q*: *The scoring of a response is subject to the interpretation by researcher; (weakness)* • Comments may imply willingness and therefore they may give it a higher score, but that is not what the participant meant; (detail)	**2**

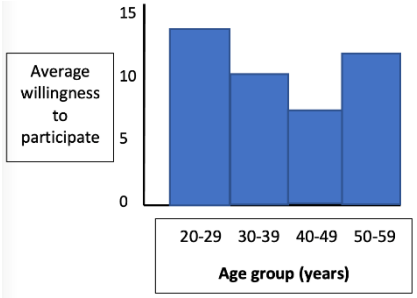
© Cambridge University Press & Assessment 2025

Question	Answer	Marks
8(c)	**When Dr Chand conducts his study, he gives each adult a score out of 15 for how much they want to participate in social activities. He divides the adults into four different age groups and finds an average willingness to participate score for each group. These averages are shown in Table 8.1.**	**4**

	Age groups (years)			
	20–29	**30–39**	**40–49**	**50–59**
Average willingness to participate score	**14**	**10**	**7**	**12**

Plot a suitable graph of Dr Chand's data. You must label the axes.

Can achieve marks for any of the following but **max 3 if the bars are not touching even if heights are correct.**



x-axis label: 'Age group (in years)'; = 1
x-axis units: 20–29 etc; = 1
y-axis label: willingness to participate; = 1
y-axis units: numbers up to at least 14; = 1
bar heights correct and touching

GradeMax

Question	Answer	Marks
9	**Dr Gul is investigating whether people focus their attention more on brightly coloured advertisements than on less brightly coloured advertisements. He is planning to conduct a field experiment on a train.**	
9(a)	**Describe how Dr Gul could conduct a field experiment to investigate the effect of colour brightness on how much train passengers focus their attention on advertisements.** **Do <u>not</u> describe sample/sampling technique or ethical issues/ guidelines in your answer.** To mark **Q10(a)**, create four 'imaginary columns' down one margin, using one column for each of the four required features. Tick each feature (**tick-a, tick-b, tick-c, tick-d**) when it appears, then underline the lett✓a ( ) for **detail**. Use L1, L2, L3, L4, L5 at the end of the response to indicate the **level**. Use the table below to mark candidate responses to this question. **The four required features for this <u>field experiment</u> are:** **(a) <u>independent variable</u>: (ads bright v dull coloured)** **(b) <u>dependent variable</u>: (attention: operationalisation)** **(c) <u>controls/standardisation</u>; (advert size/content on the advert/time of day/route of the train. At least two)** **(d) <u>experimental design</u>: (probably independent measures/ knowledge of what this means)**	**10**

© Cambridge University Press & Assessment 2025

GradeMax

<table>
<tr><th>Question</th><th>Answer</th><th>Marks</th></tr>
<tr><td>9(a)</td><td>
<table>
<tr><th>Level</th><th>The response:</th></tr>
<tr><td>Level 5
9–10 marks</td><td>• has all the required features, all with <u>detail</u>, with mostly appropriate terminology.
AND
• clearly applies knowledge of methodology involved in planning this investigation.</td></tr>
<tr><td>Level 4
7–8 marks</td><td>• has all the required features, but only some of these with <u>detail</u>, with some appropriate terminology.
AND
• applies knowledge of methodology involved in planning this investigation.</td></tr>
<tr><td>Level 3
5–6 marks</td><td>• has some of the required features with <u>detail</u> / all of the required features with <u>no</u> <u>detail</u>, and some appropriate terminology.
AND
• applies a basic knowledge of methodology involved in planning this investigation.</td></tr>
<tr><td>Level 2
3–4 marks</td><td>• has at least two of the required features, with little appropriate terminology.
AND
• attempts to use knowledge of methodology involved in planning this investigation.</td></tr>
<tr><td>Level 1
1–2 marks</td><td>• has one of the required features and uses little appropriate terminology.
AND
• makes a limited attempt to use knowledge of methodology involved in planning this investigation, e.g. may not use the method required by the question.</td></tr>
<tr><td>0 marks</td><td>No creditable response.</td></tr>
</table>
Other appropriate responses should also be credited.
</td><td></td></tr>
</table>

© Cambridge University Press & Assessment 2025

GradeMax

Question	Answer	Marks
9(b)	**Explain <u>two</u> strengths of the study you described in part (a).** **Do <u>not</u> refer to sampling or ethics in your answer.** Identification of strength = 1 (x2) **explanation** (generic or linked) = 1 (x2) Part of procedure may relate to: • operationalisation • situational / participant variables factors • controls • design / counterbalancing Accept other practical influences on validity	**4**

© Cambridge University Press & Assessment 2025