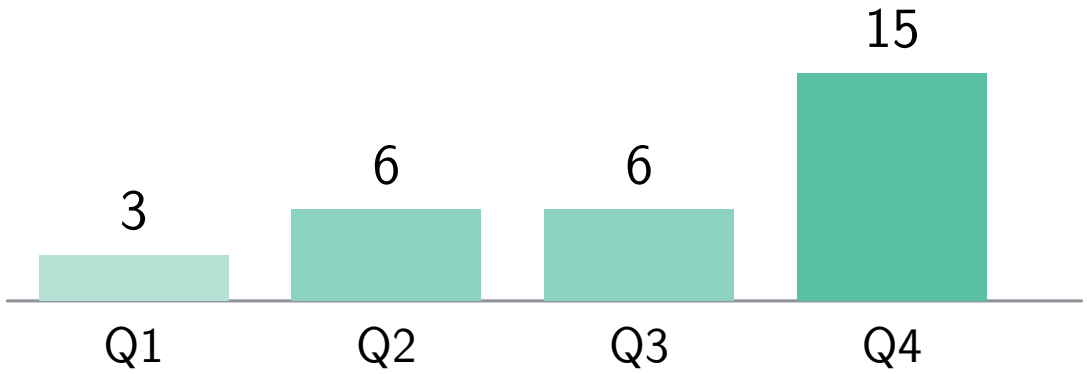
Exercise walk-through

4.4
HL: Paper 3 practice

International Baccalaureate · IB Diploma · Psychology · HL

Figure: HL extensions: culture, motivation, technology and data

30 marks, 1 h 45 min, 4–6 sources on one topic;
Q4 asks how far the evidence supports a claim



- Paper 3: half the marks sit on the final judgement.
- Match each part of the diagram to the text.

Paper 3: worked example

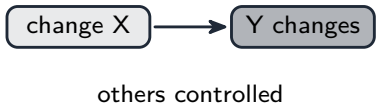
- The claim: *"The use of technology in school may have a negative effect on students' mental health."* Two of the sources are shown below.
- *Two practice sources: a group comparison and a correlation*
- **1.
- Explain one issue that limits the interpretation of the data in Source A.** (3 marks)

Sources for this lesson

- International Baccalaureate, *Psychology guide* (first assessment 2027), the HL extensions and Paper 3.
- M. W. Morris and K. Peng, "Culture and cause", *Journal of Personality and Social Psychology* (1994).
- J. Henrich, S. Heine and A. Norenzayan, "The weirdest people in the world?", *Behavioral and Brain Sciences* (2010).

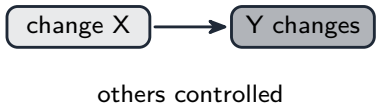
Exercise 2.1

2.1 In one sentence, state what a source must show for it to **support** a causal claim. [1]



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2.1

that changing one variable leads to a change in the other, with other variables controlled, e.g. a randomized experiment

Setup for exercise 3.1

3.1 *(Paper 3.)* Claim: **“Giving students rewards for learning reduces their motivation to learn.”** Sources B to D use fictional data for practice.

Source A. Lepper, Greene and Nisbett (1973): preschool children who liked drawing and were promised a certificate later spent about 9 % of free time drawing, against about 17 % to 18 % for children who were not promised it.

Source B. A teacher gave one Year 7 class points and prizes for every book read over six weeks; another class got nothing. The classes were not randomly allocated.

Source C. A questionnaire of 1,200 secondary students found a correlation of $r = -0.21$ between how much students said they study “for grades and rewards” and how much they said they enjoy learning.

Source D. Semi-structured interviews with 8 teachers from one city. Two themes: “rewards help weak readers start a habit” and “students begin to ask *what do I get?*”.

Exercise 3.1 (a)

(a) Explain **one** issue that limits the interpretation of the data in Source B. [3]

	during (6 weeks)	after (6 weeks)
rewards class: mean (SD)	6.2 (2.1)	2.9 (1.8)
no-reward class: mean (SD)	3.5 (1.9)	3.4 (2.0)

Exercise 3.1 (a)

(a) Explain **one** issue that limits the interpretation of the data in Source B. [3]

	during (6 weeks)	after (6 weeks)
rewards class: mean (SD)	6.2 (2.1)	2.9 (1.8)
no-reward class: mean (SD)	3.5 (1.9)	3.4 (2.0)

(a) any one, explained: the classes were not randomly allocated, so they may differ in teacher, reading level or interest; so the drop after the rewards cannot be clearly linked to the rewards; or the means are close to their standard deviations, so the difference may be due to chance

Exercise 3.1 (b)

(b) Analyse the findings in Source C and state a conclusion linked to the claim. [6]

Exercise 3.1 (b)

(b) Analyse the findings in Source C and state a conclusion linked to the claim. [6]

(b) award up to [6]: a weak negative correlation, $r = -0.21$; students who study more for rewards tend to report a little less enjoyment; a large sample (1,200), so the link is likely real but small; self-report on both variables: social desirability or mood may affect answers; correlation: students who already dislike learning may turn to rewards, so no direction of cause; conclusion: weak support for a link between rewards and lower intrinsic motivation, not for cause

Exercise 3.1 (c)

(c) Discuss how the researcher could improve the credibility of the findings in Source D. [6]

Exercise 3.1 (c)

(c) Discuss how the researcher could improve the credibility of the findings in Source D. [6]

(c) award up to [6]: triangulation: add student interviews or observations of reading, to check the teachers' themes; a second researcher codes the transcripts independently; check the themes with the teachers (member checking); interview teachers from several cities and school types, and describe the settings in detail for transferability

Exercise 3.1 (d)

(d) Using **all** the sources, to what extent can we conclude the claim? [15]

Exercise 3.1 (d)

(d) Using **all** the sources, to what extent can we conclude the claim? [15]

(d) Mark with the markbands: [13-15] all sources used and weighed (strength and direction), concepts used to judge them, a reasoned judgement on the claim; [10-12] most sources weighed, some judgement; [7-9] sources described with some evaluation; [4-6] sources summarized in turn; [1-3] little relevant. Points that may be included: Source A (experiment, random allocation) gives the strongest evidence that an expected reward can lower later interest, but with preschool children and drawing; Source B: during rewards reading rose (6.2 against 3.5 books), after rewards it fell to 2.9, below the comparison class (3.4), which fits the claim; but non-random classes and a small difference relative to the spread weaken it; Source C: a weak negative link in a large sample; correlational and self-report; Source D: teachers see both effects: rewards can start a habit for weak readers, but shift attention to the reward; credibility limited: 8 teachers, one city, teachers' views not students' behaviour; the sources suggest the effect depends on who is rewarded and whether they already enjoy the activity (self-determination theory); judgement: the claim is partly supported for students who already enjoy learning and for expected, tangible rewards; it is not shown for all students or all rewards