Distinguish association from a demonstrated causal relationship.

Key knowledge | Free preview

Learning target: Distinguish association from a demonstrated causal relationship.

Two quantities can vary together because one influences the other, because another factor influences both, or because of selection or chance. Observational association alone does not identify the explanation. A well-designed experiment with random allocation can reduce confounding, but the population, implementation and measured outcome still determine what its conclusion can support.

Try the mathematics

Task 1. An observational survey finds that students using a practice app have higher scores. Identify response and explanatory variables and two possible confounders. Does the survey show the app caused the difference?

Continue with the full worksheet

The complete resource has 2 focused task sets and substantive worked solutions. Use an exercise book or print the A4 worksheet. This preview shows the first task without its full solution.

Find this resource: https://resources.aspiretopowerlearning.com.au/vce/skills/aspire-internal-gm-u2-o1-aos1-kk-03/

Study-design reference

VCE Mathematics Study Design 2023-2027, version 1.1 (November 2022). General Mathematics; Unit 2; Outcome 1; Key knowledge; Investigating relationships between two numerical variables; bullet 3; p. 38.

The learning target is a concise paraphrase. Aspire reference: aspire-internal-gm-u2-o1-aos1-kk-03. This is an internal identifier, not an official VCAA code.

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