Validity and ecological validity

Lesson 2.4.3 | AS research methodology

Core ideas

Validity asks whether a study or measure accurately represents the behaviour or concept being investigated.

Ecological validity asks whether findings reflect real-life behaviour outside the research setting.

A task can be well controlled but still lack validity if it does not measure the intended behaviour well.

Artificial materials, unusual settings and demand characteristics can reduce ecological validity.

High ecological validity can make findings more realistic, but may reduce control over extraneous variables.

Strong evaluation explains the specific validity issue rather than only saying a study is artificial.

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Key terms

Validity: How well research measures or represents what it claims to study.

Ecological validity: How well findings reflect real-life behaviour.

Task validity: How well a task measures the behaviour or ability it is meant to measure.

Demand characteristics: Clues that may make participants guess the aim and change behaviour.

Artificial setting: A research setting that differs from everyday life.

Realism: How closely a study resembles normal experience or behaviour.

Extraneous variable: An unwanted factor that could affect the result.

Generalisability: How far findings apply beyond the sample or setting studied.

Further detail and evidence

Validity concerns whether a measure or conclusion captures the intended concept. Ecological validity concerns relevance to everyday behaviour. Demand characteristics can alter responses when participants infer expectations. Generalisability extends to populations and contexts, not only the physical setting.

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Applying the ideas

Bobo attacks may represent invited toy play rather than ordinary violence. A computerised personal-space choice is controlled but indirect. A line-up silhouette permits rejection, yet benign cartoons differ from a stressful crime. Identify the construct and the exact task before explaining the limitation.

Worked example: A memory study uses a list of random words. What validity issue could this create? A random word list may reduce ecological validity because real memory often involves meaningful information, conversations, routes or events rather than isolated words. The task may still be controlled and easy to score, but it may not fully represent everyday memory. The researcher should be careful when applying the findings to real-life remembering.

Worked example: Why might a field study improve ecological validity but reduce control? A field study may improve ecological validity because behaviour is observed in a more natural setting where people behave normally. However, the researcher may have less control over extraneous variables such as noise, crowding or other people's actions. This means the findings may be more realistic but harder to interpret as clear cause and effect.

Evaluation and connections

A realistic field task can have confounds; a laboratory task can still investigate a meaningful process. Objectivity does not ensure construct validity, and reliability does not ensure correctness. Evaluate the specific link between procedure, score and intended claim.