

# Cognitive Psychology

## Checklist

- The working memory model (Baddeley and Hitch, 1974).
  - The multi-store model of memory (Atkinson and Shiffrin, 1968), including short- and long-term memory, and ideas about information processing, encoding, storage and retrieval, capacity and duration.
  - Explanation of long-term memory – episodic and semantic memory (Tulving, 1972).
  - Reconstructive memory (Bartlett, 1932) including schema theory.
  - Individual differences in memory; Memory can be affected by individual differences in processing speed or by schemas that guide the reconstructive nature of memory. Autobiographical memory is by nature individual.
  - Developmental psychology in memory, including at least one of these: Sebastián and Hernández-Gil (2012) discuss developmental issues in memory span development, which is low at 5-years old, then develops as memory develops, up to 17-years old. Dyslexia affects children's memory, span and working memory which can affect their learning. The impact of Alzheimer's on older people and the effects on their memory.
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- Designing and conducting experiments, including field and laboratory experiments.
  - Independent and dependent variables.
  - Experimental and null hypotheses.



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- ☐ Directional (one-tailed) and non-directional (two-tailed) tests and hypotheses.
- ☐ Experimental and research designs: repeated measures, independent groups and matched pairs.
- ☐ Operationalisation of variables, extraneous variables and confounding variables.
- ☐ Counterbalancing, randomisation and order effects.
- ☐ Situational and participant variables.
- ☐ Objectivity, reliability and validity (internal, predictive and ecological).
- ☐ Experimenter effects, demand characteristics and control issues.
- ☐ Quantitative data analysis; Analysis of quantitative data: calculate measures of central tendency, frequency tables, measures of dispersion (range and standard deviation), percentages. Graphical presentation of data (bar graph, histogram).
- ☐ Non-parametric test of difference: Mann-Whitney U and Wilcoxon.
- ☐ Probability and levels of significance ( $p \leq .10$   $p \leq .05$   $p \leq .01$ ).
- ☐ Observed and critical values, use of critical value tables and sense checking of data.
- ☐ One- or two-tailed regarding inferential testing.
- ☐ Type I and type II errors



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- ☐ Normal and skewed distribution.
- ☐ Case study of brain-damaged patients, including Henry Molaison (HM) and the use of qualitative data, including strengths and weaknesses of the case study.
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- ☐ Classic study; Baddeley (1966b) Working memory model: The influence of acoustic and semantic similarity on long-term memory for word sequences.
- ☐ One contemporary study from the following: Schmolck et al. (2002) Semantic knowledge in patient HM and other patients with bilateral medial and lateral temporal lobe lesions. Or Steyvers and Hemmer (2012) Reconstruction from memory in naturalistic environments. Or Sebastián and Hernández-Gil (2012) Developmental pattern of digit span in Spanish population
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- ☐ Key Question for Cognitive Psychology
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- ☐ Practical for Cognitive Psychology; Experiment
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Do not forget to consider the Issues and Debates

