Knowledge Organiser: Year 12 Psychology; MEMORY

CODING, CAPACITY AND DURATION OF MEMORY

1

CODING

Baddeley- participants given 1 of 4 word lists to learn (semantically/acoustically similar/dissimilar). More confusion with acoustically similar in STM recall, more confusion with semantically similar in LTM recall. STM- coded acoustically, LTM- coded semantically

EVALUATION- CODING

• Artificial stimuli- word lists had no meaning to participants. Not an everyday task, lacks mundane realism (ecological validity).

CAPACITY

Jacobs- participants given a number of letters/digits and asked to recall. 9.3 digit span, 7.3 letter span. Miller- noticed lots of things come in 7s. Concluded that people can recall 7 chunks of info, plus or minus 2.

EVALUATION- CAPACITY

• Jacobs- conducted in 1887, lacks temporal validity. Research was not as rigorous as it is now. • Miller- overestimated STM capacity. Cowan found it was around 4 chunks.

DURATION

STM- Peterson & Peterson. 24 students shown trigrams, then asked to count backwards from a 3 digit number for a set amount of time. STM lasts about 18-30 seconds without rehearsal. LTM- Bahrick et al. High school yearbooks. 15 years after graduation- 90% facial recognition, 60% name recall. 48 years after graduation- 70% faces, 30% names. LTM can last potentially forever.

EVALUATION- DURATION

• Peterson & Peterson- artificial stimuli. Lacks mundane realism (ecological validity).
• Bahrick et al- high external validity as stimuli was meaningful to participants. High mundane realism.

MULTI-STORE MODEL OF MEMORY ATKINSON & SHIFFRIN

2

- Sensory Register- split into iconic (visual), echoic (auditory), and other memory stores. Input info from the environment. High capacity, short duration.
- STM- info transferred to STM if we pay attention to it. Maintenance rehearsal keeps info in the STM.
- LTM- prolonged/elaborative rehearsal takes info from STM to LTM. To recall info, it must go back to the STM before we can remember it.

EVALUATION

- Supporting evidence- Baddeley. Shows evidence of 2 separate memory stores with different coding.
- More than one type of STM- Shallice & Warrington. Patient KF had a good visual STM, poor auditory STM.
- More than one type of LTM- Tulving et al. Procedural, semantic, episodic. The MSM is overly simple

TYPES OF LONG-TERM MEMORY

3

Tulving argued there was more than one type of LTM & the MSM was too simple.

- Episodic- memory of personal events. Memories from this store have to be retrieved consciously.
- Semantic- knowledge of the world. These memories also have to be retrieved consciously.
- Procedural- knowledge of how to do things. These memories can be recalled without conscious effort.

EVALUATION

• Clinical evidence- Clive Wearing. Episodic memory impaired, semantic & procedural were fine.
• Neuroimaging evidence- brain scans show episodic and semantic memories are recalled from prefrontal cortex; but episodic on the right, semantic on the left.
• Cohen and Squire- two types rather than three. Declarative (episodic and semantic), and non-declarative (procedural).

THE WORKING MEMORY MODEL BADDELEY AND HITCH A01

4A

- Central Executive- attentional process, allocates tasks to slave systems
- Phonological Loop- auditory info. Phonological store- words we hear. Articulatory process- keeping words in a loop, so we can speak them.
- Visuo-Spatial Sketchpad- visual and spatial info. Logie subdivided into visual cache (visual data) and inner scribe (records current spatial awareness).
- Episodic Buffer- integrates visual & auditory info to record an event, which can be stored in LTM.

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Knowledge Organiser: Year 12 Psychology; MEMORY

THE WORKING MEMORY MODEL BADDELEY AND HITCH A03

4B

EVALUATION

- Clinical evidence- Shallice & Warrington. KF had good VSS but poor PL.
- Dual-task performance- Baddeley. Participants have more trouble doing two visual/auditory task, than one visual & one auditory task at the same time.
- Lack of clarity over central executive- most important but least understood component

EXPLANATIONS FOR FORGETTING: INTERFERENCE THEORY

5

Interference between memories makes it harder to locate them, so we think we've forgotten them.

- Proactive Interference- old memories interfere with new
- Retroactive Interference- new memories interfere with old
- Effects of Similarity- McGeoch and McDonald. Found that there is higher interference when memories are similar

EVALUATION

- Evidence from lab studiesthousands of lab support, e.g. McGeoch & McDonalds
- Artificial materials- often involving lists of words. Lacks mundane realism (ecological validity).
- Real-life studies- Baddeley & Hitch. Rugby players asked to recall teams played in a season, interference strongest if more games played.

EXPLANATIONS FOR FORGETTING: RETRIEVAL FAILURE THEORY

6

Encoding Specificity Principle- Tulving. Successful recall depends on the same cues being present at encoding and retrieval.

- Context-Dependent Forgetting- external cues. Baddeley & Hitch- deep sea divers study. Asked to learn & recall lists of words on land/underwater. Best recall when external cues the same.
- State-Dependent Forgetting- internal state. Carter & Cassaday- antihistamines. Asked to learn & recall lists of words on/off the drug. Best recall when internal state the same.

EVALUATION

- Supporting evidence- Baddeley & Hitch, Carter & Cassaday. Eysenckretrieval failure is the main reason for LTM forgetting.
- Questioning context effectsBaddeley. Context effects are not very strong, e.g. being in different rooms.
- Artificial stimuli- recalling meaningless lists of words is not an everyday task. Lacks mundane realism (ecological validity)

FACTORS AFFECTING EWT: MISLEADING INFORMATION A01

7

LEADING QUESTIONS

Loftus & Palmer- videos of car crash. Critical question- 'about how fast were the cars going when they __ each other?' contacted, bumped, hit, collided, smashed. More severe verb= higher estimated speed.
Response bias explanation- changed how participants answered.
Then, second experiment tested substitution explanation- whether the participants' memory had been changed. Asked if they'd seen smashed glass. Those asked the question with 'smashed' were more likely to say yes, but there was no glass.

POST-EVENT DISCUSSION

Gabbert et al- showed pairs of participants videos of a crime from different angles. Experimental group- discussed afterwards, control group didn't. 71% in experimental group reported info they hadn't seen. 0% of control group did this.

EVALUATION

- Useful real life applications- can apply to real crimes to get more reliable information • Artificial tasks- emotional levels differ between watching a video and witnessing a crime in real life. Lacks mundane realism (ecological validity).
- Individual differences- Anastasi and Rhodes. Younger generations more accurate in identifying suspects, however all age groups are most accurate when identifying someone of a similar age to themselves (own age bias).

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Knowledge Organiser: Year 12 Psychology; MEMORY

FACTORS AFFECTING EWT: ANXIETY

8

POSITIVE EFFECT

Yuille and Cutshall- interviewed witnesses of real life gun shooting. Those who rated themselves as highly anxious at the time recalled more info from the event.

NEGATIVE EFFECT

Johnson and Scott- participants in a waiting room and heard an argument. Low anxiety condition- man emerged with a pen and grease on hands, high anxiety- paper knife & blood on his hands. Better identification of man in low anxiety condition.

Explaining Contradictory Findings The Yerkes-Dodson Law, adapted by Deffenbacher. Optimal point of anxiety

EVALUATION

- Weapon focus may not be relevant. Pickel et al used a video of a salon, recall equally bad when there was a gun & when there was a raw chicken. Unusualness rather than anxiety/threat.
- Field studies lack control- Yuille and Cutshall. Can't control what participants have done since the event, e.g. post-event discussion.
- Ethical issues- creating anxiety in a study opens participants up to psychological harm. Have to weigh up costs & benefits of doing this.

IMPROVING THE ACCURACY OF EWT: THE COGNITIVE INTERVIEW

9

THE COGNITIVE INTERVIEW

Fisher and Geiselmann. Based on Tulving's ESP and other cognitive techniques to try and improve accuracy of EWT.

1. Recall everything- witnesses should recall every detail about the event that they can remember, as 'irrelevant' details may cue more important ones.
2. Reinstate the context- witnesses should 'revisit' the scene in their mind. Based on context-dependent forgetting.
3. Reverse the order- it is more difficult to lie if you're telling a story backwards. Also stops the interference of schema.
4. Change the perspective- witnesses should imagine the scene from a different perspective. Prevents interference from schema.

The Enhanced Cognitive Interview Fisher et al- focus on social dynamics, e.g. eye contact. Reduce witness anxiety.

EVALUATION

- Cognitive interview is time consuming- takes longer than standard police interview to train & to conduct
- Some elements more valuable than others- Milne and Bull. Report everything & reinstate the context produce the best results.
- Support for effectiveness of enhanced cognitive interview. Kohnken et al found that the ECI produced more correct info than a standard police interview

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How do we use Knowledge Organisers in Psychology

How can you use knowledge organisers at home to help us?

- **Retrieval Practice**: Read over a section of the knowledge organiser, cover it up and then write down everything you can remember. Repeat until you remember everything.
- **Flash Cards**: Using the Knowledge Organisers to help on one side of a piece of paper write a question, on the other side write an answer. Ask someone to test you by asking a question and seeing if you know the answer.
- **Mind Maps**: Turn the information from the knowledge organiser into a mind map. Then reread the mind map and on a piece of paper half the size try and recreate the key phrases of the mind map from memory.
- **Sketch it**: Draw an image to represent each fact; this can be done in isolation or as part of the mind map/flash card.
- **Teach it**: Teach someone the information on your knowledge organiser, let them ask you questions and see if you know the answers.

How will we use knowledge organisers in Psychology?

- **Test:** We will do regular low stakes tests to check your ability to retrieve information from memory.
- **Mark our answers**: Once you have done a low stake test you can mark your work using the knowledge organiser.
- **Improve our work**: Once you have finished a piece of work you may be asked to check your knowledge organiser to see if there is any information on it that you could add into an answer.

ASSESSMENT	SECTION ON KNOWLEDGE ORGANISER	DATE	SCORE
Learning Check point 1			/10
16 marker exam question			/16
MID UNIT			/20
Learning Check point 3			/10
END OF UNIT			/40