

Effect of motivation
on short term
memory recall
psychology essay



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Empirical research interested in memory recall has suggested a number of stimuli could influence memory recall. Amongst a multitude of stimuli that is claimed to effect memory is motivation. Motivational stimuli's such as financial gains, recognition, appraisal and many other forms of rewards are employed in various occupations (Tiglao-Torres, A. (1990). These can be looked upon as cues for organised responses thus improving learning which "is the making of memory" (<http://www.library.spscc.edu/electronicreserve/ece275/Memory1Ebsco.pdf>). However, researches into motivational stimuli propose conflicting ideas of the influence they have in regards to memory (Murty, V. P., LaBar, K. S., Hamilton, D. A., & Adcock, R. 2011) & (Weiner, B., & Walker, E. L. 1966).

According to a cognitive perspective, memory is constructed from the information we take in from the environment around us. Short-term memory determines whether the information is of any relevance. This in turn is either stored in long-term memory or discarded. Thus, short-term memory is an essential process in any individual's progression through life whatsoever domain it may be. Particular attention should be drawn to importance of the information being perceived as this process binds information to memory. Influential stimuli that highlight the importance of committing information to short-term memory are of relevance.

Weiner, B., & Walker, E. L. 1966 were the very first to publish research in regards to motivational stimuli and memory. Results showed that each time an incentive was cued memory recall was significantly higher. In addition, it was proposed that an increased amount and quality of incentive increased memory retention.

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Subsequent research has indicated varying stimuli that affect memory.

Hastings, E. C., & West, R. L. 2011 and Hoffman, B., & Schraw, G. 2009 investigated the influence of self-efficacy, results indicated an increased retention of memory in participants who had high levels of self-efficacy. An alternative study by Bracken, C., & Lombard, M. 2004 suggested social interaction with computers increases memory. In addition, Harley, W. r. 1968 investigated incentive and non-incentive based recall. Results indicated that recall diminished for non-incentive items whilst not affecting incentive for recall.

The studies discussed briefly allude to various ways in which motivational stimuli influence memory. However, a study by Ngaosuvan, L., & Mäntylä, T yielded results that suggest otherwise. Participants had given subjective ratings for motivational stimuli; although highly rated stimuli were cued memory, recall had not been affected.

Consequently, there is incongruity amongst these empirical studies. The aim of this study was to examine the effect of a motivational stimulus on memory recall. It was hypothesised that short-term memory recall would increase when a motivating stimuli is cued.

Methods

Design

An experimental design was used to test whether memory recall would be affected by motivation. The independent variable (IV) was a motivational stimulus which was cued during a memory recall task. The motivating

stimulus was a prize of sweets for a participant who had correctly recalled
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the most words. The dependable variable (DV) was the amount of words recalled by participants in controlled and experimental conditions.

Standardised instructions were given to all participants.

Participants

An opportunity sample of 30 participants were selected from Nottingham Trent University. The participants consisted of 19 females, 11 males and the mean age for was 19.05 years. No exclusion criteria were used.

Materials

The word list was generated randomly from a program found at <http://www.watchout4snakes.com/CreativityTools/RandomWord/RandomWordPlus.aspx>. Also, a packet of sweets were used as a prize.

Procedure

Each researcher was randomly allocated a group this was to maintain consistency in the results. Information in regards of the purpose of the study and consent were obtained. Once demographics had been recorded each participant was given a list of twenty words to memorise for a minute. A minute later participants were asked to recall the word list and results were then collated. In the experimental groups participants were informed of a prize of the highest recalled words from the list. On completion of the task a prize (sweets) was given to one participant and all participants were debriefed and thanked for talking part.

Results

Table 1 shows in both conditions the range is similar. The mean score in the control group is slightly lower than the experimental which to an extent. The SDs in both groups indicates the variance from the mean for was very little.

Table 1: Descriptive statistics for memory recall in motivational and non-motivational conditions

Experimental

Control

Mean

9.46

8.4

Range

5-13

4-16

SD

2.03

3.18

Figure 1 reveals the mean score for the motivational condition falls within the confidence intervals of the controlled condition. This suggests that the sample means for both conditions are from the same population.

Discussion

The results suggest that motivation does not affect memory recall. There was not a huge difference between the mean scores of the experimental (9.46) and controlled (8.4) groups. Although participants were informed of a reward for recalling a set of words, the amount of recalled words did not differ hugely from participants that recalled words with no reward.

The evidence collated from this study demonstrates that incentive has no effect on memory recall. This contradicts with previous studies which suggest that memory recall will increase in such conditions (Weiner, B., & Walker, E. L. 1966) and Hastings, E. C., & West, R. L. (2011). Conversely, it supports and builds on Ngaosuvan, L., & Mäntylä, T. 2005 findings that motivation is non-effective in relation to memory.

In particular Weiner, B., & Walker, E. L. 1966 established that a low-level incentive has an effect on memory. The incentive used in this study was parallel to the one used by Weiner, B., & Walker, E. L. 1966. Consequently, the results contradict specifically the claim that a low-level incentive effects memory recall.

On the premise of this, the impression that motivation effects memory in domains such as education and learning may possibly be questioned. For example, Tiglaio-Torres, A. 1990 claimed that motivation could improve

productivity in government workers similarly Ames, Carole 1992 posited <https://assignbuster.com/effect-of-motivation-on-short-term-memory-recall-psychology-essay/>

motivation as being influential to learning. The fact that a low-level incentive did not have an effect on memory recall implies that motivational strategies used to improve memory in various occupations may not be needed. This is not to say that motivation as a tool of improving memory is not essential.

The experiment could not withstand limitations and there were numerous explanations why no difference was found in the two groups. Firstly, it could be argued the level of incentive had no value to participants therefore, a measure of differences would be of no value. Equally, it could reveal that a low-level incentive has no effect on memory recall. Secondly, the environment in which participants completed the task was not the same as other groups and had taken place at different times of the day. The anomalies mentioned could have many implications such as attention span at different times of the day, atmosphere, lighting and levels of noise in which participants completed the task to name a few. Lastly, the fact that participants were first year students at university undergoing a major transitional period in their life most definitely would have affected the attention given to the study.

In conclusion evidence suggests that memory recall is not increased when a motivational stimulus is cued. Although the stimulus was of a low-level it still had no effect on memory recall. Additional research into perceived motivational stimuli and differing levels of stimuli need to be considered to determine whether an effect on memory takes place in such conditions.