



## GODDEN AND BADDELEY (1975)

**Aim:** To investigate cue-dependency theory using divers in wet and dry recall conditions

Godden and Baddeley wanted to test **cue-dependency theory** by investigating the effect of environment on recall. This was looking at **context cues** because it was to do with external environment, not the individual.

### PROCEDURE

Divers were asked to learn words both on land and underwater. The words were then recalled both on land (dry) and underwater (wet). This made four conditions:

“dry” learning and “dry” recall  
“wet” learning and “dry” recall

“dry” learning and “wet” recall  
“wet” learning and “wet” recall

There were 18 divers from a diving club, and the lists had 36 unrelated words of two or three syllables chosen at random from a word book. The word lists were recorded on tape. There was equipment to play the word lists under the water. There was also a practice session to teach the divers how to breathe properly with good timing, so as not to cloud their hearing of the words being read out. Each list was read twice, the second time was followed by fifteen numbers which had to be written down by the divers to remove the words from their short-term memory

Each diver did all four conditions, making it a **repeated measures** design. There was 24 hours in between each condition. Every condition was carried out in the evening, at the end of a diving day. When on land, the divers had to still wear their diving gear

### RESULTS

As predicted, words learned underwater were best recalled underwater, and words learned best on land were best recalled on land. The results are shown in the table below, the figures are the mean number of words remembered in each condition:

		Recall environment	
		Dry	Wet
Study environment	Dry	13.5	8.6
	Wet	8.5	11.4

The mean numbers of words remembered for conditions with the same environment for learning and recall (13.5 out of 36 for dry/dry and 11.4 for wet/wet) were much higher than those with dissimilar locations

### CONCLUSIONS AND EVALUATION

As the hypothesis stated: more words were remembered when recall took place in the same environment as learning: this is to do with the context-dependent cues

Godden and Baddeley identified some problems with the study, including that the divers were volunteers on a diving holiday, so the setting could not be controlled as the condition on each day was in a different place

A further difficulty is that there could have been cheating underwater (because the researchers were unable to observe the participants), however, the researchers thought that there was no cheating going on because that would have always produced better results underwater, which you can see is not the case

Also, when the location of learning and recalling the words was different, the divers had to move from one situation to the other: whereas when the locations

were the same, this did not happen – it is possible that this led to the poorer recall. Godden and Baddeley chose to investigate this factor further, by running a second study with two separate groups. There were 18 divers, who each did the **disrupted** and non-disrupted conditions. The disrupted condition involved going in and out of/out and in the water in between learning and recall when the situations were the same. The study produced results of 8.44 words for the non-disrupted condition and 8.69 words for the disrupted condition. Because these numbers were so similar, it was concluded that this factor did not cause the difference in results of the primary study

Saying these weaknesses, the study did however have strong controls, which makes it replicable so reliability can be tested. Also, even though the task was artificial, the participants were all divers who had experience with performing tasks under the water, and so the environment they were in was not unfamiliar, therefore there was a *limited* presence of ecological validity for the experiment