Remembering Lectures by Connecting to Personal Experiences

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Comprehension and memory of lectures

Students who relate what they learn in classes to their personal experiences tend to remember the contents well. To understand how the connection helps learning, two types of training activities to support memory are compared.

Previous research: Comparing lectures with jigsaw

Conducted retrospective interviews four to six months after the completion of the two-year course. Compared what students could remember from regular lectures and from dynamic jigsaw classes.

Class type	# of targets	% recall Facts + Implication	% recall Keywords
Lectures	11	2.2%	56.1%
Jigsaw	22	15.8%	7.7%

Students were able to describe integrated facts with implication using their own words.

Research Context

College sophomores were offered an extra-curricular session, to enhance their memory about lectures. Out of the class of 78, thirteen volunteered and served as participants to this study. Two 90 min lectures, on human interface and computer simulation of expertise, were chosen to be the target.

Experiments

Two types of memory support activities

"Personal Experience" (PE) Condition
- Encouraged to relate whatever they could remember about the lecture to their personal experiences
- Given concrete examples using a non-target lecture, which they were encouraged to mimic
- Number of participants: n =6

or

"Keyword" (KW) Condition
- Given key-words, and encouraged to make sentences by using them and/or by building ideas on them
- Number of participants: n =7

Procedure

1st recall
Collected within a week after the lecture. With the most general prompts.

Training
Immediately after the first recall, the students were trained "to memorize the important contents of the lecture", by using key words (The KE condition) or by being prompted more specifically to relate to personal experiences (The PE condition).

2nd recall
Conducted four weeks after the first recall. Free recall without cues.

All the students were tested twice on how much they could recall from the lectures. Both training required the students to produce recalled summary for three times, at different levels of specifications.

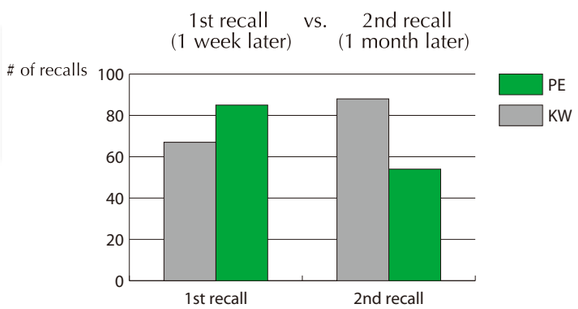
Results and discussion

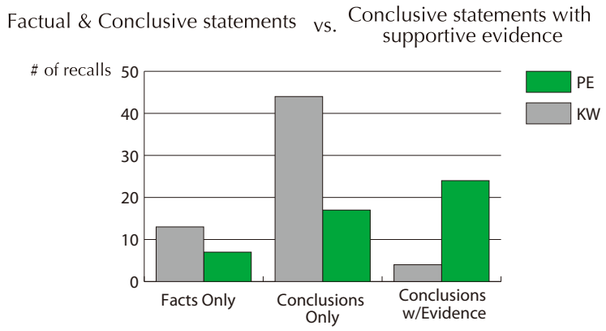
The written recalls were unitized, and then categorized by their contents. The content categories focused for this report include:

Factual statements
e.g. "Chess experts remembered many pieces."

Conclusive statements (in isolation)
e.g. "Chess experts could remember more pieces than novices, implying that their knowledge structure on chess was more complex."

Conclusive statements with supportive evidence
e.g. "Experts' knowledge structure on chess is more complex than that of the novices, but this is domain specific, because with numbers, they remembered just as many as the novices."





	1st recall immediately after	2nd recall one month after
PE as evidence	11	0
Conclusion paraphrased from lecture	4	3
Evidence paraphrased from lecture	1	10

# of cases (out of 14)

The students in the PE condition appear to have received better support, not just for memorizing but for comprehension.
The post experiment interview indicates that the generation of personal connections may have enhanced the explicit meaning making, which somehow transferred to the second recall.

Future Work

How generalizable is this?
We need to study how the PE based memory supports scientific understanding.
For instance, we also identified different types of personal experiences worked differently: some of them solicited more explicit statements with evidence, but we do not know yet how this worked.