For decades, memory researchers have been trying to establish how to learn effectively. Out of many learning techniques under consideration, so far two have been found to produce robust learning benefits under a variety of conditions: 1) learning by testing oneself on the to-be-learned information, also called retrieval practice (this is usually compared to merely re-reading the to-be-learned information), and 2) spacing the study sessions for the same information in time (compared to massing them). Thus, spaced retrieval practice is currently the gold standard in terms of how to learn.

Here we propose that the utility of this highly effective learning strategy can be further improved. This can be achieved by adding to it another technique, featuring prominently in memory theorising, but so far underappreciated by educational researchers. This technique of *varied learning* requires that at each study opportunity, the same information is processed in a slightly different way; for example, if a student were to learn the meaning of the Finnish word *lattia* (floor), they could first study this word embedded in a sentence such like *A dog is lying on the lattia*, and then be shown the same word again, but in a slightly different sentence context: *Dad is sweeping the lattia*. This way of learning has been recently shown to be more effective than always studying in the same way (like seeing the sentence *A dog is lying on the lattia* again). Varied learning becomes even more effective when coupled with spaced retrieval practice – using the aforementioned example, if a learner tries to retrieve the meaning of *lattia* when presented within the sentence about the dog, and later with the sentence about it being swept.

Thus, the aim of the project is to provide the necessary theoretical and empirical basis for varied retrieval practice so that it could be acknowledged as an evidence-based learning strategy. This aim will be realised by:

1) Discovering the basic principles behind the varied retrieval technique, which will allow for establishing the conditions under which this technique leads to better memory compared to constant retrieval or restudy;
2) Discovering when and how varied retrieval facilitates transfer of the newly acquired knowledge to different settings, for example by helping answer questions asking about information that was never studied, but can be inferred from the newly studied information;
3) Discovering how learners evaluate the effectiveness of varied retrieval, with a particular focus on helping them appreciate its utility as a learning strategy.