

Revision methods:

Technically speaking, there are countless ways to tweak basic revision techniques which would give us countless different revision methods. This research project will therefore only look into those revision methods whose effectiveness has been scientifically studied. This will allow them to be better compared so that the software application that results from this research will incorporate features that most improve the users studying quality and thus grades.

Spaced repetition - Memorising: This is a widely known method of memorising information. The theory is that our brains memorise information more firmly the more its repeated, and every time a piece of information is repeated, it takes longer for our brains to forget it as the neural pathways to that information are strengthened.

The 'spaced repetition' technique uses this fact to repeat a piece of information with growing gaps of time in-between each repetition. The information, in this manner, remains memorised with minimal time spent (instead of repeated every day, the information is repeated just when your brain is about to forget it).

Pomodoro technique - Productivity: This is a method, created by Francesco Cirillo, that aims to improve productivity so that more work can be done in the same amount of time. The Pomodoro technique aims to improve productivity by changing work flow to accommodate the average persons limited attention span and habit of getting distracted from the work that needs to be done.

The Pomodoro method involves splitting up a large task or set of tasks to be done into short 25 minute slots (called Pomodoro's), and separating each Pomodoro with a 5 minute break. After 4 Pomodoro's (100 minutes work), a larger break of 20 minutes is taken.

Uses this method is said to increase attention span, as the short but constant breaks allow the brain to remain stimulated and focused on the task during the Pomodoro parts.

Feynman technique – Understanding complexity: This technique created by Richard Feynman is most effective at helping a person understand complex concepts and ideas. First, it works by a person writing a concept name at the top of a page, then beneath that explaining the complex concept to someone who knows nothing about it. Doing so should show gaps in understanding and knowledge of the concept, as those parts that cannot be simplified. For these parts of the concept, the person should then review those parts of the concept that they could not simplify and try again. Eventually the concept should be simplified and clarified, ensuring a complete understanding of the concept. Explaining concepts simply can be done by breaking down every complex step or using analogies. Both help with retention.

Parkinson's law - Efficiency: This is the statement by Cyril Northcote Parkinson that "work expands so as to fill the time available for its completion". What this means is that if we assign a large amount of time to complete a short task, the task will, psychologically, become more complex and daunting. The extra time may be filled with unnecessary stress and tension about getting it done or with additional complexity not necessary for the task. The law states that to complete a task most efficiently the correct amount of time should be set to complete it, with the time limit being shorter than required if possible. This sets a

close deadline for the task, which we are likely to try to complete. Even if the deadline is not exactly met, the amount of work completed in that timeframe would be much larger than if the timeframe set had been larger.

Active learning vs passive learning: Passive learning includes the revision methods typically employed by students, such as reviewing notes and rewatching lectures already.