

# Wilson's Revision Cycle

Chartered College of Teaching Annual Conference Poster Competition 2018  
Winner Category: KS4-5

Ambition School Leadership



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## Research Question:

What is the effect on attainment of the use of the 'Wilson's Revision Cycle' as a tool to increase pupil motivation, engagement and independence in order to improve results in science?

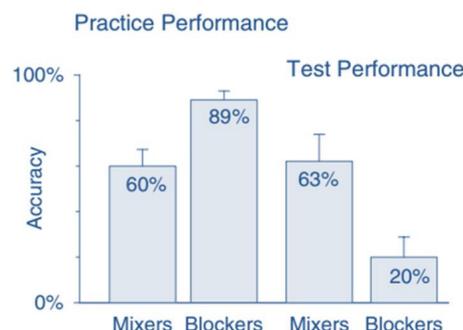
## Abstract:

Wilson's Revision Cycle is an experiential learning method that is designed to improve a pupil's self-regulation of work whilst embedding concepts and knowledge in an ordered way in the long term memory, rather than relying on short term memory. It is a tool, developed over 10 years by Iain Wilson and refined during Ambition School Leadership's Teaching Leaders Programme, that is designed to improve the self-regulatory and divergent nature of learners within a cohort by using a 'chunking' method.<sup>(1)</sup>

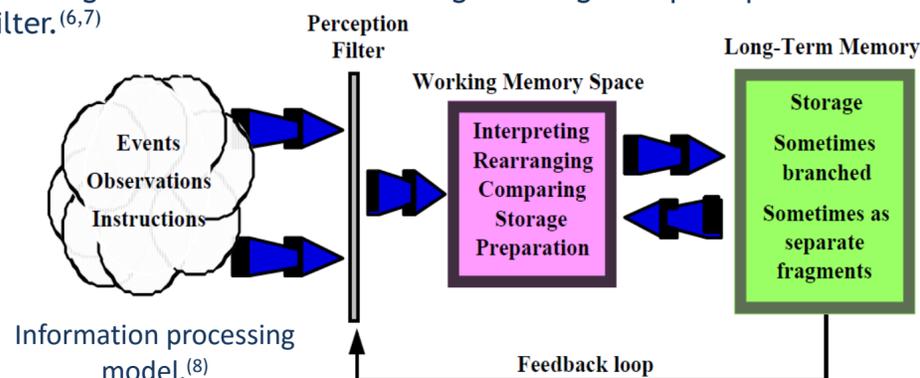
## Theory:

A revisiting, or interleaved, format of learning has been seen to overcome the challenges with conceptual change by providing opportunities for the learner to reflect on their learning, encourage the identification of misconceptions and weaknesses, and then be supported while they seek to confront and overcome them.<sup>(2)</sup> It is here that Wilson's Revision Cycle focuses the learners efforts.

The 'Interleaving' effect on retention, where mixers refers to those who interleave their studies and blockers refer to those who study in blocks.<sup>(3)</sup>



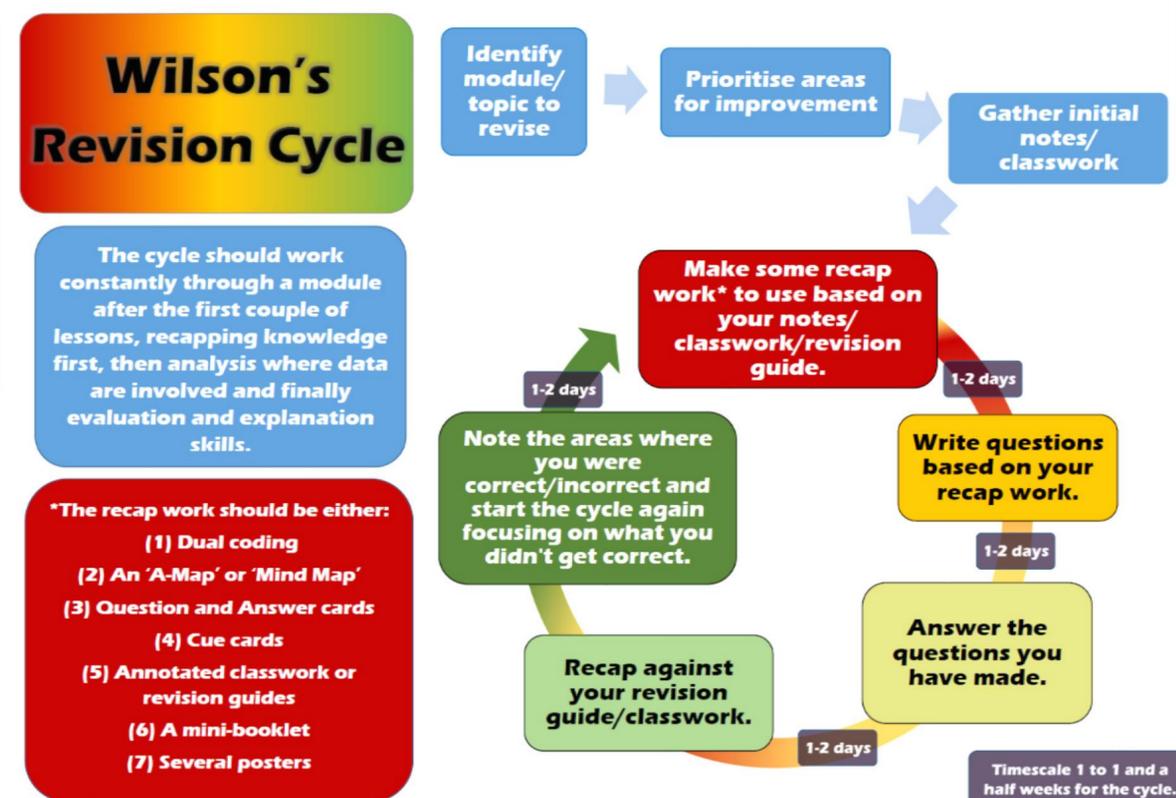
Effective transfer of information, from the working to the long-term memory, improves the links between ideas, leading to greater ease of access to information and this allows the learner to utilise the skills of a divergent learner and view work from different perspectives.<sup>(4)</sup> Those who can do this will have a greater chance of success in academic tests such as those used in science.<sup>(5)</sup> The forming of cogent links in the long-term memory allows information to be meaningfully understood by establishing relationships with prior knowledge, an approach that is proven to enable information to be retained much longer because the learning has been meaningful to the learner and can get through the perception filter.<sup>(6,7)</sup>



The information being linked effectively in this way leads to easier access to information stored in long term memory and as a result, in traditional assessments, performance is enhanced.<sup>(4)</sup>

## The Aims of Wilson's Revision Cycle:

- 1) The cycle will be seen to be *possibly* positive in its effect if there is an improvement using external data when compared to previous students, using a matching method.
- 2) The cycle will be shown to have had a positive effect if the performance of the group is statistically significantly greater than previous students with similar starting points and there is a correlation between Attainment and Teacher Marking of tasks.



## References:

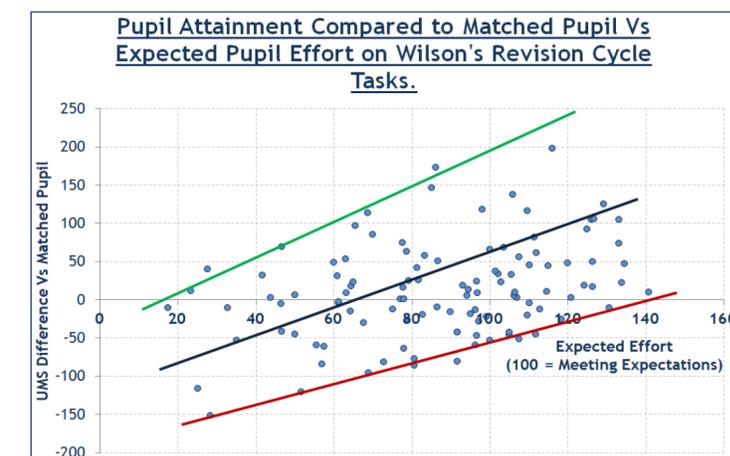
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## Comparison group:

In the absence of the ability to utilise a randomised control trial, as suggested by Torgerson and Torgerson 2013, a comparison group has been selected based on the ability to measure the impact in an unbiased way and will be following a matching approach as outlined by Coe et al 2013.<sup>(9,10)</sup> In producing the matching groups prior to the trial we will be able to see that "the intervention and comparison groups are equivalent on observable characteristics" and therefore will produce comparable results.<sup>(11)</sup>

## Findings and Conclusions:

- 60% of students performed above the level of their matched counterparts.
- There is a clear correlation between effort on Wilson's Revision Cycle and attainment at GCSE.



- The average difference in UMS per student meeting or exceeding teacher expectations on the cycle was +37.71 whereas the difference for those performing under teacher expectation on the task was -0.96 UMS.

The outcomes from this study, show that Wilson's Revision Cycle, as a metacognitive approach, has a positive impact on pupil outcomes over time. There is a clear link between the effort that pupils put into these tasks and the attainment compared to peers with similar starting points using an historic matched group who did not have access to the intervention.