

The Three Sieves of Proof?

The Theorem

Andy has not completed his PhD.

Metaphysical – Andys' supervisors agree that the PhD has not been completed. Since there is general agreement on this, the theorem is deemed to be correct.

Engineering – A dissertation has not been submitted nor has the viva voce taken place. In the experience of my supervisors, those who have not completed these have not been awarded a PhD. Therefore Andy has not completed his PhD and the theorem is proven at this level.

Scientific – The University awards the qualifications. Andy has not got his PhD since there is no record on the qualifications database of Andy having been awarded a PhD therefore this is an axiom at this time.

If the above is correct then it *could* be used to assess whether my theora are axiomata.

Sieve 1 - Metaphysical

Each theorem can be assessed against each of the items in [the matrix of education](#). For example, what is the view of each theory on in the matrix on whether people are naturally curious? Each item could be scored as one of:-

- XX - The item explicitly contradicts the theorem.
- x - The item implies that it contradicts the theorem.
- o - Either the item does not address the theorem or is agnostic on it.
- ✓ - The item implies agreement with the theorem.
- ✓✓ - The item explicitly agrees with the theorem.

This would not only show whether there is general agreement on each of the theora, but would also place them in context in the literature.

Sieve 2 – Engineering

If a theorem gets through the first sieve it could then be tested against the empirical data derived by Hattie. This would show whether there is any experience of this theorem and whether that experience back-up or rejects the theorem. For example, which of the criteria in Hattie's list refer to metacognition and how do they score?

Sieve 3 – Scientific

If a theorem passes through the first two sieves then the third level is reached. Here experiments would have to be devised which test the theorem in practice. For example, the theorem that learners change their preferences could be tested by looking at the data from Moodle to see whether they always head for a particular type of instructional material (e.g. text, video or sound) or whether that varies. This could then be followed up by an interview with the learner in which their clicking patterns are explored (it may be that they just hit the wrong link).