Briefing: Does the 'learning pyramid' have any basis?

The 'learning pyramid' claims that some modalities of instruction can enhance retention over others. Typically, listening and reading are rated as poor methods for instruction whereas practical activities are rated high. The learning pyramid appears to be a misappropriated version of Dale's 'Cone of experience' which proposed that audio-visual media existed on a continuum from more concrete to more abstract forms. However, the percentages given in the pyramid have no scientific basis. Evidence suggests that teachers should select the modality of instruction based on the requirements of the content as all of the techniques listed can be effective.

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http://evidenceintopractice. wordpress.com/2014/05/02/ the-pyramid-of-lies/

The pyramid of learning

The pyramid of learning frequently appears as a graphical representation and tends to be presented uncritically in teacher training and professional development sessions. It comes in a variety of forms, but a common representation is given in the figure below.

The principle suggestion is that more 'passive' forms of learning (e.g. listening to a lecture or reading) lead to drastically lower retention in memory than more 'active' forms of learning (e.g. doing for oneself or teaching another person).

The origin of this claim appears to have its roots in Dale's 'Cone of Experience'. Dale attempted to classify various types of learning experience in a progression from the most abstract (at the top of the cone) to the most concrete (at the bottom). This original scheme did not present any numbers or percentages. Indeed, Dale's claims about this classification system were cautious and he insisted that the order should not be seen as a hierarchy or indicate a value judgement regarding the relative merits of each instructional strategy (Molenda, 2003). According to Thalheimer (2006) the percentages were added by an employee of the Mobil Oil Company in 1967 who cited no research (though National Training Laboratories claims to have conducted the research behind the original numbers given).
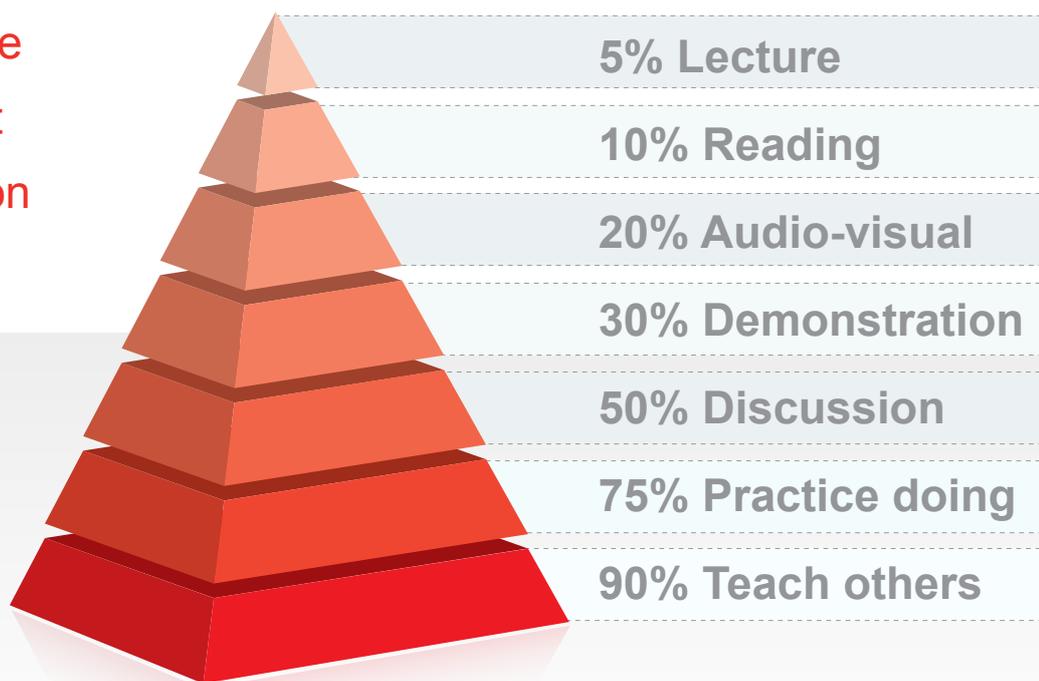
Is the learning pyramid helpful?

There is considerable variation in the numbers used in the learning pyramid where it crops up in education. However, whilst there might be an intuitive appeal to the order or the percentages given, the learning pyramid lacks scientific credibility. Willingham (2013) makes the point that there are simply so many variables that affect memory retrieval (e.g. the nature of the content, the age of the individual, the delay between learning and retrieval, etc.) that there is simply no validity to assigning percentage retention scores for any of the modes in the pyramid.

A review by Lalley and Miller (2007) evaluated the learning pyramid as a guide to student retention. They found no credible research supporting the pyramid and in their review of memory research found that all of the instructional methods identified resulted in retention. None of the methods produced consistently superior retention than any of the others and all were effective depending on the context of the learning and the material being learnt. They point out that as well as being inaccurate, the pyramid of learning is a potentially harmful influence on teaching. "A paramount concern, given conventional wisdom and the research cited, is the effectiveness and importance of reading and direct instruction, which in many ways are undermined by their positions on the pyramid. Reading is not only an effective teaching/learning method, it is also the main foundation for becoming a 'life-long learner'."

The pyramid of learning has no credible scientific basis and makes a number of demonstrably false assertions regarding the effectiveness of different methods of teaching. Teachers should exercise professional judgement based on the context and demands of the learning material and select from the full range of instructional methods available to them.

Average student retention rates

5% Lecture

10% Reading

20% Audio-visual

30% Demonstration

50% Discussion

75% Practice doing

90% Teach others

References

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