When presented with a climb, a climber can either start to climb themselves and reach the top without any difficulty or struggle (this is analogous to Piaget’s ‘assimilation’), or at some point along the climb the climber comes across some difficulty or a conflict that they simply can not tackle by themselves (this might be an unfamiliar overhang or difficult face that they haven’t tackled before).

The climber then requires assistances, or guidance, to enable them to conquer the climb. They have to learn a new skill or alter their understanding of the climb; this is analogous to Piaget’s ‘accommodation’.

The idea being that a climber can only gain more experience and skill at climbing if they are presented with problems they have to learn from, rather than conquering the same climb over and over again.
Cognitive “reach” can be analogised with the physical reach of a climber; if a climber reaches for hand holds too close to themselves they are going to make progress but not significantly and potentially the climb becomes tedious and boring. However a climber can not make progress if their handhold is outside of their physical reach. So to make significant steps in learning and to maintain interest a climber needs to work in their ZPD, so that they are pushed appropriately with the correct support and guidance.

Things the learner can not physically reach

Things the learner can reach but no significant progress is being made

Things the learner can reach and make significant progress

Things the learner can reach and make significant progress
Different “cognitive climbers” might have different cognitive reach.

More adept cognitive climbers might also be able to make cognitive leaps of learning just like how a climber might leap for a handhold that is potentially out of their physical reach.
A climber’s reach can also be augmented by working with other climbers, essentially through roping them together.

In this way a climber that might be struggling with a given aspect of the climb can be assisted by other climbers as long as the choice of team is appropriate (think how useful a climb would be with an expert climber roped to a complete novice).
Here the idea of scaffolding, allowing learners to make small steps through guidance, is embodied by handholds placed throughout the climb to assist climbers that require it through suggestion and guidance.

Initially climbers are shown the hand holds but, importantly, the climber has to progress themselves. As the climbers reach the higher parts of the cognitive climb the handholds either become less obvious or are slowly removed entirely and the climber has to use their own skills and experience to progress further with less assistance.
Contingency

(Wood and Wood, 1996; Black and Wiliam 1998)

When a learner struggles with a concept it is important to assist and help the learner early, and with the appropriate level of support required, through contingent teaching; here embodied by support ropes.

However, make the support ropes too short and the climber is getting too much support, they are being hauled up the climb and not learning anything. Make them too long and the climber isn’t getting enough support and will still struggle to make progress, essentially they will just dangle there.

Once support has been given the climbers still need to climb the rest themselves as the support ropes are removed or become irrelevant.
Bloom’s Taxonomy
(Bloom, 1956)

- Remembering
- Understanding
- Applying
- Analysing
- Synthesising
- Evaluating