

Developing the Executive Brain

Grass Roots Classroom Leadership Models Thinking

“When learners take charge of their own learning and experience success over time... they are literally growing a brain and mind that ensures future successful learning...so developing the executive functions is the key to powerful learning and raising standards,”
— +Renata Caine, et al, 2008.

The grass roots level, or, the classroom, is the area where educational innovation and teacher professional development should be being developed and implemented. This requires the individual teacher to implement strategic leadership that persuades the students to own the processes that are being developed, giving them a sense of self-control and self-direction.

We already know that our students are going to have to work with knowledge that hasn't been discovered yet, technologies that haven't been invented yet, jobs that have not been invented yet and a good deal beyond. Dramatic changes to the world climate are one area students must be prepared to work with. Thus, our school system, and the teachers in them have a paramount duty to prepare the students for the change that will be the rest of their lives.

Teachers know or should know that we have brains known for their plasticity: the ability to mould and re-mould. In the frontal lobe is the executive function of the brain which can be taught to behave like a high-powered executive in a top company.

There are many specific executive functions that need to be developed. Only a sampling will be covered here. The basic two are hindsight and foresight. Hindsight is the ability to reflect and reach conclusions about actions that have been completed. Foresight is to plan future actions which often are closely aligned to what is discovered from hindsight. Of special importance is the ability to think critically, flexibly and creatively. Aspects of the revised Bloom's Taxonomy fit well here: analysis, evaluation and finally a solution. Emotion will be an important attribute too, and this suggests that Social and Emotional Learning should be an important part of the overall curriculum.

Here is a piece of reflective metacognition a year seven girl has written about a test: (Observe how it fits the points above and note the executive decisions that she makes.)

“Last night's prep was quite easy, but I regret not using my tree map because my map (in the test) could have been at a higher level. I only got 9 out of 16 but I know I could have done better. I was not too proud. If we did another map like this again I would use my tree map. I put the direction star in the wrong place but that was soon fixed. I also made a key and I'm sure it's easier to read now. Unfortunately, my frame was in pen.”

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A simple warning: Trust either developed or developing is crucial, so take care in any conversations you may have either collectively or individually and avoid any form of marking or grading.

However, measurement is needed. In this case, raw data which can be used for enabling the students rather than measuring them is what is required. The best raw data for this is student voice that shows how the students got to where they are, what hindered them, what enabled them, and by further interpretation, where the teaching and learning needs to go next. It is about what the students on the spot finds relevant and important. The example above demonstrates this concept.

The question is how best to collect this data. Metacognitive reflection is the answer. Additionally, in the process, the students will be developing real world skills that will

have the basis to make them productive and happy citizens throughout their life in the real world after school. There are several of these so-called soft skills, perhaps the most important being self-control, closely followed by grit, but there are still more (Hoerr, 2017). As the students become aware of their own actions and their results, new insights are generated. It is a short step from this to develop a collective class consciousness about the effects we have on one another.

Hattie points to these insights, or reflections, as allowing the teachers to look inside students' minds, seeing learning through their eyes and therefore able to help them become their own teachers, as the year seven student above has done.

At least initially, exploring bite-sized mini research projects will bring best results. Follow the KISS principle: Keep It Short and Simple. While the individual teacher's strengths, weaknesses and interests, let alone their imagination should be the guide, initially some straight forward bread and butter issues would be a good starting point. Thus, some starters to get thinking going may include:

- Hindsight: What was learned/discovered about the way I worked this week?
- Foresight: What do I need to concentrate on next?
- Emotions: What emotions did I have to control this week?
- The teacher needs to do likewise. Their executive brain needs extending, too.
- What were the strengths and weaknesses in the way the project was worded or explained to the students?
- What actions of the students and/or the teacher during the project showed a need for a different strategic approach?
- How can I enhance rapport and camaraderie?

The time allocated to each project is something else to decide. A term is long enough to start. It gives a sense of urgency and closure. However, if a term seems too



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short, it can always be extended if needed. Time, also, needs to be allocated within the weekly class schedule for students to provide their reflections. What is timetabled tends to get done. The last half hour on Friday works well. The previous working week provides plenty of opportunities for reflection, recent enough to be fresh in memories, giving authenticity and integrity.

Teachers should use this time also. Their executive memories are important as well. Moreover, modelling is never more important than the teacher's actions in the classroom. To ram this home, the last few minutes of the period, after the students have finished, is an ideal time for the teacher to share with the class his or her observations for the week.

Grass roots action is required here by individual teachers in their classrooms. It is not someone else's responsibility. Bottom up leadership, trumps top down leadership every time. However, keep your principal and syndicate manager informed on what you are doing and how it is working, for they do not like surprises. Moreover, the manager that does not know what is going in the classroom is at risk! Make this a team effort in helping students develop their abilities to reflect on their thinking. 

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