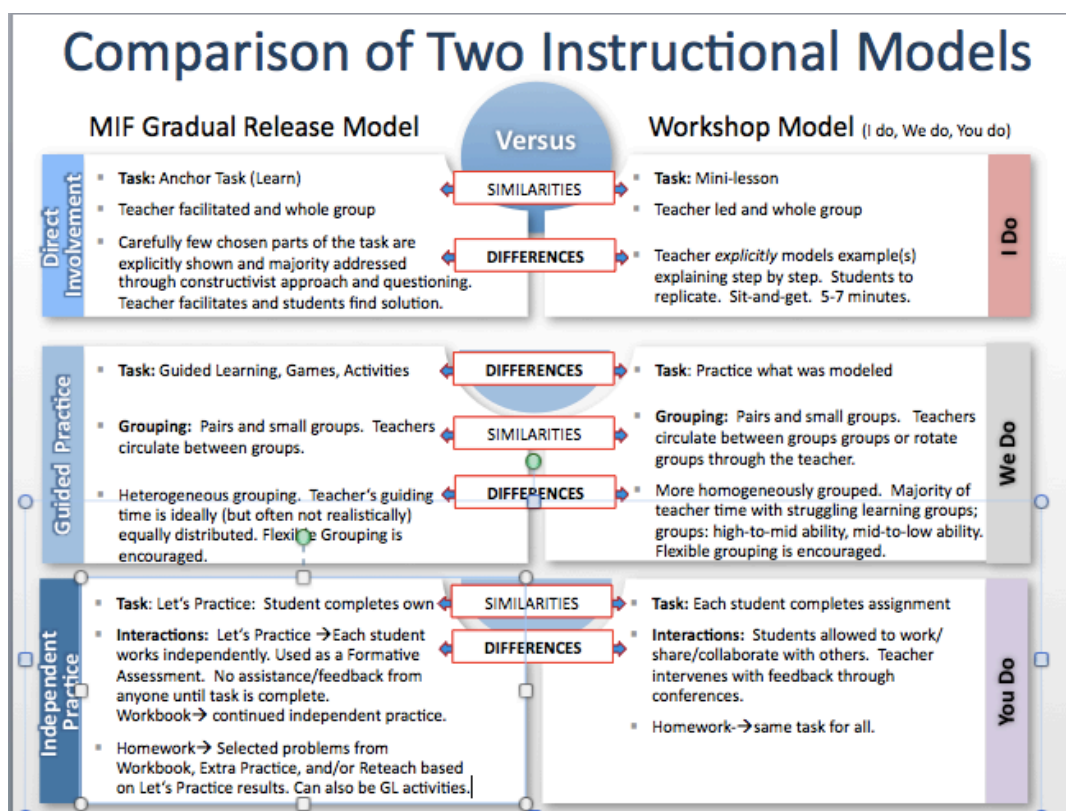


The focus of the last newsletter was a deeper dive into the non-negotiables of Singaporean pedagogy and the instructional strategies that define each lesson. The gradual release lesson structure is a part of that instructional practice and can take on a few different forms, but should capture the intent that Singapore had in the delivery of the lesson.

Gradual Release Lesson Structure

As you look at the descriptions of the parts of the lesson structure, remember that Gradual Release is **NOT** the *I Do, We Do, You Do* model. That model does not build understanding, as it is not a gradual release of content/practices but rather a model that simply asks students to mimic teacher actions in a procedural way. Take a look at some of the similarities (which breeds the confusion), but more importantly the differences in the two models.





Lesson Structure

Teach/Learn—the first Learn opportunity will serve as the Anchor Task (subsequent Learn sections within the day's lesson will not serve as the anchor, but rather as new learning that can be scaffolded into their newly formed schema).

Features of an Anchor Task (from Ban Har's blogspot—edited by Kelly Snyder)

1. **Less is More:** Students will not be solving a lot of problems, but instead will focus on one (or a small number or related tasks). Student engagement with one task, for an extended period of time, allows ample learning opportunities for all (struggling learners get the time they need while advanced learners are made to go deeper and prevented from going faster). Teachers will ask questions to create a problem-solving environment.
2. **Multiple Strategies:** MIF may have suggested strategies and/or students may suggest some of their own. In any case, an essential step in teacher planning is to anticipate student responses to the task(s). Teacher should try to provide strategies that can support struggling students (more literal methods) and also challenge the able students (more abstract/elegant methods).
3. **Have a key question:** the Anchor Task allows students to go back to the key question again and again. This is how students begin to generalize the mathematics instead of seeing it in isolation.

Guided Practice/Learning—this section should look different from the Teach/Learn. If the teacher must work through the entire GP with the students, then he/she did not spend enough time during the Teach/Learn with the concept. The GP tasks should be opportunities for students to construct understanding of content with the teacher, the peers, and/or the materials as the guide. This portion of the lesson is to flesh out the inconsistencies in thinking and prepare students to complete problems independently. It is not intended to be homogeneous grouping by ability. This group work opportunity is based on Vygotsky's Theory of Social Learning. Below is a short summary of this theory:

The major theme of Vygotsky's theoretical framework is that social interaction plays a fundamental role in the development of cognition. Vygotsky believed everything is learned on two levels.

First, through interaction with others, and then integrated into the individual's mental structure.

Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals. (Vygotsky, 1978, p.57)





A second aspect of Vygotsky's theory is the idea that the potential for cognitive development is limited to a "zone of proximal development" (ZPD). This "zone" is the area of exploration for which the student is cognitively prepared, but requires help and social interaction to fully develop (Briner, 1999). A teacher or more experienced peer is able to provide the learner with "scaffolding" to support the student's evolving understanding of knowledge domains or development of complex skills. Collaborative learning, discourse, modeling, and scaffolding are strategies for supporting the intellectual knowledge and skills of learners and facilitating intentional learning.

The implications of Vygotsky theory are that learners should be provided with socially rich environments in which to explore knowledge domains with their fellow students, teachers and outside experts. Teachers are used to support the learning environment by providing tools for discourse, discussions, collaborative writing, and problem-solving, and by providing support systems to scaffold students' evolving understanding and cognitive growth.

Let's Practice-this is the first place where students can show understanding of the lesson independently. It should not be done as a whole group or with help from the teacher or other students. This portion of the lesson helps the teacher determine whether students should move onto the Workbook to prove understanding or whether the teacher should intervene with re-teaching options.

Workbook—this last part of the gradual release lesson structure is considered the proof of understanding. The problems in this section are of four types: same as problems from class, a variation of classwork, problems that develop a rule/generalization, a variation on this rule/generalization. The Workbook problems should be done at school and can be sent home as homework for independent practice. If portions of the Workbook are sent home as practice, carefully choose the problems to be sent home and hold the students accountable for the understanding in these problems.

E.g. When students return to school the following day with completed homework, post the answers, have students check and discuss in small groups or partners. The teacher can then review the problems that gave students difficulty OR are of particular interest in the discussions.

POYTC/Brain at Work (C123)-these non-routine problem-solving opportunities are for all students. The intent is for them to be completed independently. If students are not able, they may work in small groups or partners (only after some time is spent trying to solve on his/her own) with a classroom discussion to follow. Teacher may also work through the problems with students who are struggling. Exposing students to the situation, questioning, and class discussion is invaluable.





Test Prep-this is the end of chapter test. It will always serve as the assessment as it meets the grade level standard. It is NEVER ok to substitute the Chapter Review/Test as the end of chapter test. Problems that give students difficulty should be used in future discussions and as a learning tool.

Assessments:

Math in Focus assessments are designed to measure student understanding at three levels: Basic, Application, and Novel.

Basic questions require students to demonstrate foundational skills and basic understanding. Students who respond accurately to these types of questions can solve simple word problems, perform basic computations, and demonstrate that they have acquired the necessary skills and understandings to allow instruction to move forward. The grade level expectation is that all students will achieve mastery at this level.

Application questions require students to apply their skills and understandings to routine situations. Students who respond accurately to these types of questions are able to apply their learning to word problems and questions that are similar to those experienced in classroom instruction. The grade level expectation is that most students will achieve mastery at this level.

Novel questions require students to transfer their skills and understandings to unique situations. Students who respond accurately to these types of questions are able to solve problems they have never experienced in their classroom instruction. Through conceptualization and generalization, they can see the relationship between their classroom instruction and the novel situation – and solve the problem. The grade level expectation is that only some students will achieve mastery at this level.

It is very important to include novel questions on assessments. Novel questions enable the district to assess for deep conceptual understanding. Without them, the district would primarily be assessing students on their procedural skill – the ability to follow a learned sequence of steps. This approach to assessment is a unique and essential part of preparing students for success, and it is a strength of the *Math in Focus* program.

Move forward and take the deep dive into learning
Math in Focus--

The *Math in Focus* Specialist Team

If you would like to contribute or unsubscribe to this email, please respond to kelly.snyder@hnhco.com

