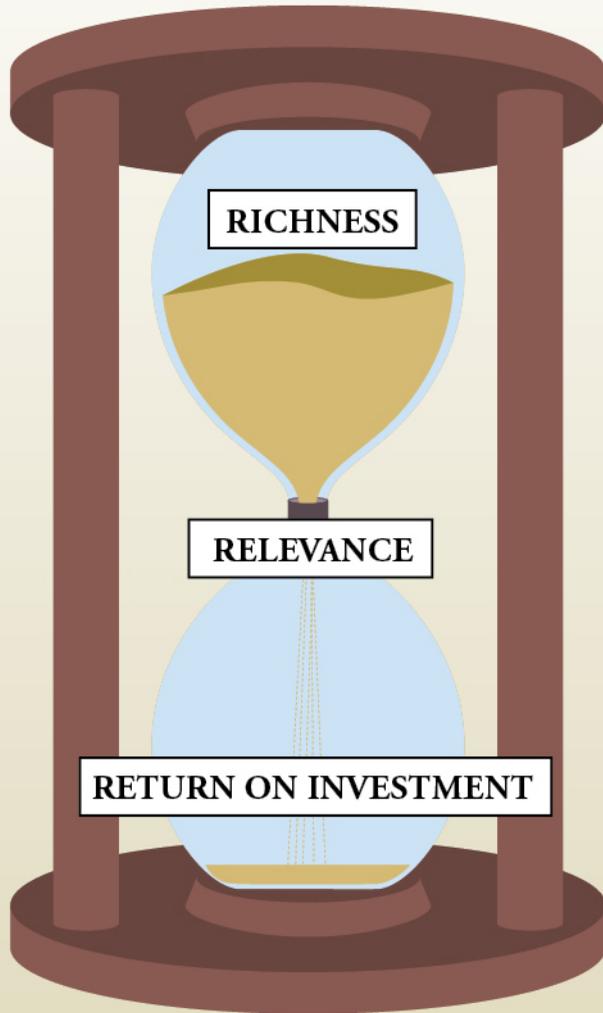


# *The New 3 Rs*



*of Teaching and Learning*

JAMIE BRICKER

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# *The Fill Up – The Bird Feeder*

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The traditional 3 Rs have long been considered the cornerstones of the educational experience. Ever since Sir William Curtis stated the importance of Reading, Writing, and Arithmetic almost two hundred years ago, they have forged the foundation of teaching and learning. If students could confidently decode, correctly spell, and competently manipulate numbers, they were deemed ready to effectively tackle the challenges of the outside world.

Students' minds basically served as bird feeders, where information was continually deposited until a testing situation required certain facts and figures to be extracted. Historically, the essence of teaching involved the expert in a given subject imparting his/her knowledge to someone with less expertise (Quinn, Heynoski, Thomas & Spreitzer, 2014). For far too long, the only *strategy* routinely utilized by teachers and learners alike was memory-based, and this preoccupation with recall inadvertently undermined students' opportunities for real learning.

***What a student supposedly learned equated to what  
a student successfully remembered.***

**Figure 1 – The Traditional 3 Rs: *The Fill Up***



*Every student has a different feeder for each subject area.*

*Teacher deposits information into the feeder. Each student's feeder gradually fills.*

*Information is withdrawn from the sides of the feeder by the student on a per needs basis, typically during some form of assessment.*

*Remaining information sits in the feeder until it is eventually either retrieved by the learner, or the learner empties the remaining food at the end of the unit or term.*

Regular deposits were made into each student's specific feeder for each specific subject. Teachers were constantly refilling these feeders with fresh seeds of *learning*, and students were expected to indiscriminately retain all of this incoming information until instructed by the teacher to extract specific facts and figures.

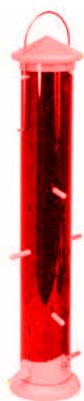
Each student had his/her own collection of feeders, as each feeder held data for distinct curriculum areas. There was very little mixing of the seeds from the various feeders, as minimal attempt was made at recognizing significant cross-curricular applications. Instruction in mathematics, geography, history, and science, for example, closely adhered to the respective curricula and were independently taught and assessed.

Various assessments throughout each unit required random bits of information to be withdrawn from the given subject's feeder. These tidbits were then used to answer questions that routinely required filling in the blank, completing some other cloze activity, or answering a multiple choice question. The exhibition of any learning was based on memorization, not mastery.

All parties were also well aware of the fact that present learning had little connection to future learning within a given subject, and virtually no connection to future learning in any other subject area. The barometer of success was simply to measure how well a given student could accurately recall the required material at the required time. Teaching was all about conveying information to the students, and learning was all about remembering these facts and figures (Olson & Katz, 2001). In addition to helping confirm how much data the student had dutifully memorized, the end of unit summative test or exam also served another important purpose: it was the trigger to empty the bird feeder of all remaining bits of information. After all, sufficient space had to be created to accommodate the next fill up.

Successful students became proficient at quickly and correctly retrieving the required test material from the mass of information stuffed into each subject's feeder, as the ability to retrieve became synonymous with the ability to achieve. This withdrawn data was then inserted into the designated place in the assessment, and this pattern of filling the educational prescription continued for decades in virtually all tests in all classes in all schools. Memorizing endless streams of isolated facts and figures led to a kind of anti-synergy, as the total long-term impact of this alleged learning was far less than the sum of these additions to short-term memory.

**Figure 2 – Extracting Required Facts and Figures**



**Math**

*What does diameter mean?*



**Geography**

*Where are the Andes Mountains located?*



**History**

*Who was the first man on the moon?*



**Science**

*When does water become ice?*

There was a direct correlation between the capacity of the feeder and the difficulty of the test, as the more facts that could be included on an assessment, the more studying was required. Even within a large, overflowing feeder, however, there was very little actual food for thought. Students were denied any substantive intellectual nourishment and, instead, were fed a steady diet of measly, memorizable morsels.

***Being able to achieve meant being able to correctly retrieve.***

Assessments based on this model were truly for the birds! They had about as much long-term accountability as weather forecasts, in terms of how much future use was expected, and demanded, of the new learning, as each unit of study was a distinct entity with a very limited shelf life. There is, in fact, no more room on the shelves of today's learners to store the endless stream of new facts and figures. As Eric Schmidt, the executive chairman of Alphabet Inc. stated several years ago, "Every two days we now create as much information as we did from the dawn of civilization up until 2003."

Trying to store this endless torrent of informational tidbits is clearly an exercise in futility. By the same token, subsequently being asked to randomly retrieve some of this information is equally pointless, as much of it will already be inaccurate and/or obsolete shortly after the completion of the summative assessment. Curriculum content clearly must provide a pathway to facilitate the learning journey, but it provides only a direction, not a final destination. Today's teaching and learning must involve far more than simply rewarding a good memory.

There will always be some memorization associated with new knowledge and skill acquisition, but to live a successful and fulfilling life in our modern world, teaching and learning must be guided by **the new 3 Rs: Richness, Relevance, and Return on Investment**. If classroom tasks don't routinely connect with all three of these critical components, then educators must honestly ask themselves, **"What R we teaching our students?"**