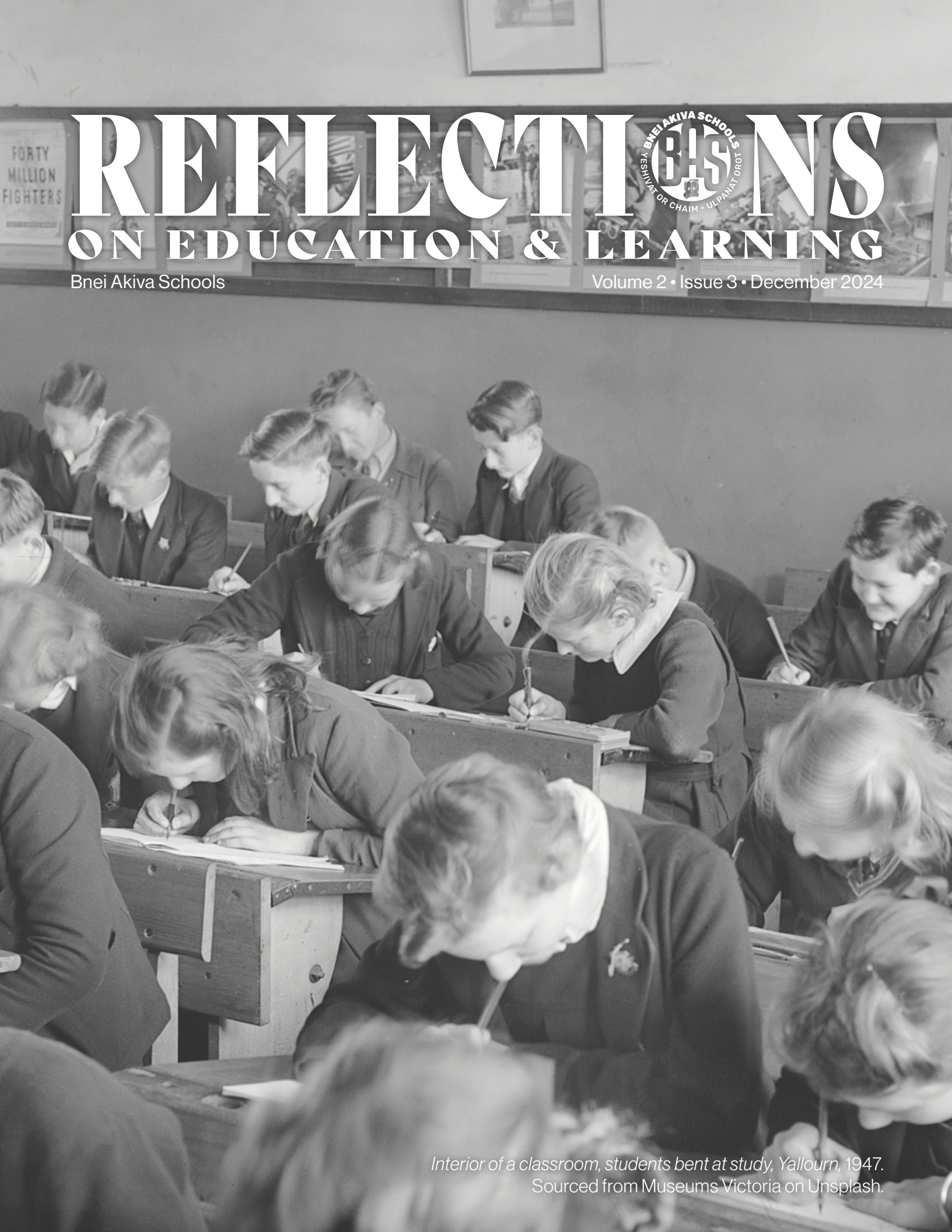


REFLECTIONS ON EDUCATION & LEARNING

Bnei Akiva Schools

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*Interior of a classroom, students bent at study, Yallourn, 1947.
Sourced from Museums Victoria on Unsplash.*

EDUCATION VERSUS SCHOOLING



Rich Dlin
Mathematics

“For the mind does not require filling like a bottle, but rather, like wood, it only requires kindling to create in it an impulse to think independently and an ardent desire for the truth.”

—Plutarch (Babbitt, 1927)

HAD PLUTARCH BEEN A TEACHER today, he may have begun “For the mind does not require filling like a bottle, nor the distribution of grades....” Yet as teachers in the modern education system, we find ourselves tasked with both filling bottles with prescribed curricula, and then subsequently assigning grades to said bottle. These grades theoretically reflect how well they were filled, but, more practically, are seen to represent the bottle’s suitability for continued filling at some higher institution. This paradigm can perhaps be more appropriately labelled as ‘schooling,’ rather than ‘education.’

Which is to say, schooling is the filling of a vessel, whereas education is the kindling of a flame. Our modern schooling model can be somewhat cynically simplified to a series of stages:

First, some blurry entity (for general studies in Ontario, we call it *The Ministry of Education*), decides in committee what nuggets of knowledge students will enter our sphere not possessing, but should ultimately leave our sphere having captured. These nuggets—the entity calls them “expectations”—are then laid out in official documents and comprise the

curriculum. Consider the following expectation snippet, as laid out in the Ontario Ministry of Education Mathematics Curriculum for grade 9:

<p>By the end of this course, students will:</p> <p>C1.5 create and solve equations for various contexts, and verify their solutions</p> <p>Examples</p> <ul style="list-style-type: none"> • Equations <ul style="list-style-type: none"> ◦ linear equations; for example, $180(n - 2) = 1440, 3x + 2 = 2(x - 5), \frac{t - 2}{3} = -8$
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(Ontario Ministry of Education, 2024)

The same nebulous entity also details how we will be able to tell if students have acquired said nuggets and goes to some lengths to outline by which criteria we will numerically assess the level of acquisition. Consider the following excerpt from page 39 of *Growing Success: Assessment, Evaluation and Reporting in Ontario Schools*:

Determining a Report Card Grade: Grades 1 to 12

Teachers will take various considerations into account before making a decision about the grade to be entered on the report card. The teacher will consider all evidence collected through observations, conversations, and student products (tests/exams, assignments for evaluation). The teacher will consider the evidence for all the tests/exams and assignments for evaluation that the student has completed or submitted, the number of tests/exams or assignments for evaluation that were not completed or submitted, and the evidence of achievement that is available for each overall expectation for a subject in a particular grade or course. In addition, the teacher will consider that some evidence carries greater weight than other evidence; for example, some performance tasks are richer and reveal more about students' skills and knowledge than others. Teachers will

weigh all evidence of student achievement in light of these considerations and will use their professional judgement to determine the student's report card grade. The report card grade represents a student's achievement of overall curriculum expectations, as demonstrated to that point in time. (Ontario Ministry of Education, 2024)

Next, the students arrive in our classroom, and we begin the process of imparting the nuggets, simultaneously making sure we will be able to demonstrate and justify our numerical assessment. For the students, we lay out, in full transparency:

- what the curriculum is (e.g., the student will solve linear equations like $180(n - 2) = 1440$),
- what success will look like (e.g., student demonstrates the necessary steps to determine the value of the variable that satisfies the given equation),
- how they will know they have succeeded (e.g., students can verify, in proper form, that the solution they have determined satisfies the equation), and
- how we intend to assess the success (e.g., through the student's written work and through conversations with and observations by the teacher).

This often creates the impression that success is defined as the students' ability to reproduce a prescribed skillset in a prescribed way. As the school year progresses, our ideal student slowly absorbs the curriculum, and successfully demonstrates absorption on an expectation-by-expectation basis, which we document.

Finally (and repeatedly), we measure the level of success to which the material

was absorbed and assign a grade. For many students this is the reward—or perhaps more accurately, the payment. Because for many students, parents, and even teachers, school has become a *marketplace*. Students come to work and perform the tasks teachers train them for and assign. Teachers pay them with grades. The pay scale—sorry, the *rubric*—is a contract of sorts, but like all contracts is subject to interpretation, and, therefore, negotiation. So, it might be fair to say that students come to school not to *learn*, but to *earn* (or at least acquire) grades. Just as they come to us as empty vessels we are tasked with filling, they also come to us with empty grade wallets we have the currency to load. Further, since it is perceived as the teacher's responsibility to fill the vessel, and since the teacher loads the wallet, then if subsequently there are insufficient funds for the student to buy into the next level of schooling, the fault is seen to lie with the teacher.

It is hard not to view this process as contrary to what Plutarch envisions. But there are some unavoidable truths. We *do* have to deliver a curriculum. We *do* have to assign grades. And ultimately, our students will be judged by a faceless system based on the grades we assign, and

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this will impact their options for future stages of their schooling and their professional journeys. So, cynicism aside, the pressure on them and on us is real, and significant.

Still, we must kindle the flame. We must, as Plutarch asks, stir the impulse to think independently and stoke an ardent desire for the truth, for this is the essence of education. And we can. There is significant overlap between 'schooling' and 'education,' and it is in that overlap that we should plant our feet. It is to that overlap that we should draw our students. Many of us know this. So how do we do it?

First, it is important to understand that the curriculum on its own will never be fully relevant to every student. In some cases, it will never be relevant to most students. Consider the example in mathematics from the curriculum, where we teach students how to apply algebraic algorithms to solve equations like $180(n - 2) = 1440$. One can poll 50 adults long out of school and be hard pressed to find more than a few that will consider that a specifically relevant skill in their lives. So, when a student asks: "When will I use this?", the most honest answer just might be "you probably won't". At least on the surface. In truth, the value of pure mathematics as a discipline should not be weighted on what it is good *for*. Promoting and practicing the type of abstract thinking mathematics requires is *good*. This is understood intuitively by people appreciating art: nobody has ever stood under the ceiling of the Sistine Chapel and demanded to know what it is good *for*. It is simply good. And that is reason enough.

So, where does that leave us? Well, it leaves us as educators dedicated to nurturing younger generations into adults who will work to make this world a better one than the one we handed off. Curriculum then can be

viewed not as the reason the students are with us, but as our opportunity to interact with them. Like the plot in a laundry detergent commercial, the curriculum is only there to legitimize what is really going on: education.

The curriculum then is our medium. We can seize each nugget and demonstrate our joy of learning. We can get excited that even though solving $180(n - 2) = 1440$ may seem like a useless skill, it is so deeply satisfying to understand that we can do it reliably, thanks to a *provably* effective algorithm. We can delight in watching students transform from someone who doesn't get it into someone who can't believe they didn't get it, and someone who can extend a concept to solve problems not previously encountered. We can encourage critical thinking and questioning. We can happily admit the limitations of our own knowledge when we encounter a question we can't immediately answer, or a problem we can't solve, because it presents an opportunity to experience the excitement at the process of finding out the answer or discovering a solution. We can help them discover that the great thinkers of history, like Plutarch, were just people who reveled in the exercise of thought. Curriculum gives us something to think about.

We can use the curriculum to show them that *challenging* is not synonymous with *hard*. If something is *hard*, it will always be hard. For example, it is hard to deliver bad news, and never becomes easy. A challenge, on the other hand, is something that will require effort to do before we discover that it's easy. That lesson—effort is how we overcome challenges—transcends all curricula. It is independent of grading, and more representative of what we call “real life”, where most often there is no prescribed template for success, only a reward for creative

and effective problem-solving. The deep satisfaction of overcoming through honest effort encourages people to seek challenges to repeat that experience.

The joy of learning encompasses all these lessons.

The payoff to this mindset is that when students adopt this attitude to their education, the grades follow. When they stop focusing on trying to get high grades, and start focusing on learning, the grades inevitably end up higher, and without negotiation. They learn that instead of worrying about what's fair, or how someone else is controlling their access to success, that they can concentrate on themselves and their own growth, and that success is not a destination but a path.

And it's a path they can walk. That is the flame Plutarch asks us to kindle, and by viewing school not as a marketplace where grades are currency and students are contractors, but rather as a forum for discovering the joy of learning and accomplishment, we can do just that. ■

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