

Editorial

FOR MANY YEARS, SOME EDUCATORS AND MORE TECHNOLOGY COMPANIES HAVE BEEN preaching the transformative potential of technology in education. Often the results have been underwhelming. Research has shown that technology is effective only when combined with proven teaching strategies.

Research into the effectiveness of technology in education has shown that it is often less transformative than we might hope, but in personalized learning there is great potential that technology can make a crucial difference. Technology can automate much of the hard work involved in personalization – assessing, setting new activities, and monitoring progress – leaving the teacher free to work on more in-depth issues with their students.

The technology is sophisticated enough to do this, and we know the teaching processes that are needed to support this. The challenge is to bring the two together in a way that improves outcomes for children.

Throughout this issue you can read a range of perspectives on the opportunities and challenges of personalized learning, and I hope that you find them useful in your work.

Robert Slavin

Editor-in-Chief

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Better is an international magazine, written and read by researchers and educators around the world. To make the magazine as accessible as possible, we retain the spellings of the author (eg program/programme or behavior/behaviour) but explain contextual information about school systems (eg, Grades, Years, school types)

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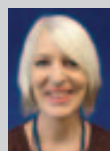
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Mary Sheard

This issue of *Better* is dedicated to the memory of Mary Sheard, a Research Fellow at the Institute for Effective Education, who died on 26 July 2014 after being ill for several months. She is very much missed by her friends and colleagues.



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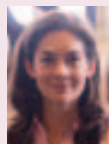
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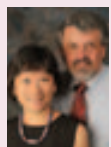
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Personalizing learning and teacher expectations

William (Bill) Powell and **Ochan Kusuma-Powell** consider how teacher expectations can get in the way of personalizing learning

DURING A VISIT TO A LARGE INTERNATIONAL school in Europe, a middle school humanities teacher asked Bill to observe her lesson and give her feedback on her questioning techniques. The teacher had set work for the class and then called students to her desk for individual conferences. Bill sat next to the teacher, recorded the students' names and the teacher's questions. At the conclusion of the class period, Bill coached the teacher through a reflecting conversation. After she had summarized her impressions of the lesson and her questions, Bill asked if she would like to see the data. He then handed her the script of her questions.

Within minutes Bill watched the blood drain from her face and there was a prolonged period of silence. Finally she sighed and shook her head. "The questions match exactly my estimation of the students' ability." Tears formed in her eyes. "This isn't what I intended. The bright, capable students got interesting, challenging open-ended questions. The

struggling students got closed questions that required little more than rote memory. I know this isn't the way it should be, but I wouldn't have known it if you hadn't recorded my questions."

This teacher had a very important revelation: every day, teachers construct beliefs about the intelligence and ability of their students. These implicit beliefs can be positive or negative, expansive or limited. However, generally these are not articulated, are usually held at an unexamined, subconscious level, and have a very powerful influence on teacher behavior and decision-making.

Personalized learning is providing each and every student with an invitation to interact with a meaningful curriculum. It starts with how teachers construct their expectations of individual students.

The power of teacher expectations

As a profession we have known the power of teacher expectations for many years. The

classic research on expectancy theory in education was undertaken by Rosenthal and Jacobsen in what has subsequently been referred to as *Pygmalion in the Classroom*. The researchers told teachers in a San Francisco elementary school that some of the students they were about to receive for the new school year had been tested and identified as high-achieving "bloomers". The teachers could expect these children to make accelerated achievement gains during the year.

In fact, the students had been selected entirely at random with no testing. However, as the year passed, these students did make significant achievements, outperforming their peers. Rosenthal and Jacobsen attributed the accelerated progress of these students to teacher expectations and their differential treatment as supposedly gifted students. Out of this study came the notion that there is a strong correlation between what teachers believe about students and how students actually perform.

PERSONALIZED LEARNING

Teacher expectations

Ability versus readiness

When we talk to teachers about personalizing learning for students, we will often hear comments about the specific student's ability. This is a cause for concern. Ability is about the power to perform – the quality of being able to do something – a natural or acquired skill or talent. The American Heritage Dictionary lists teachability as a synonym. This suggests to us that when we construct our expectations around perceptions of student ability, we are engaged in forecasting future potential. From our experience, many – if not most – teachers are very poor at such crystal ball gazing.

What we are pretty good at as a profession is knowing what an individual student may be ready for at any given point in time. We observe students in the classroom, we monitor their skill mastery, explore their levels of conceptual understanding and arrive at an estimation of what the individual student needs next. This is personalized learning.

Sometimes, in our workshops, a teacher will ask if personalized learning doesn't stigmatize students. It is an excellent question. The research is abundantly clear that learning is negatively affected when students are placed in so-called low ability groups. Student self-esteem is atrophied and teacher expectations are lowered. There is also no expectation of escape.

There is, however, no evidence to suggest that students are stigmatized or adversely affected by readiness groupings. The constellation of students may be exactly the same; the difference is in the teacher's perceptions and expectations. For example, a student who is placed in a beginners' group will be expected, with practice, to move into an intermediate group, and from there into an advanced group. The perception of teachers is critical to personalized learning.

Teacher expectations and mindsets

Carol Dweck identified two mindsets: fixed and growth. These mindsets have to do with what we perceive as the cause of our success or failure. If we attribute our success or failure to factors outside our direct control (natural talent, inherited intelligence, luck, or task difficulty) we will tend to develop a fixed mindset. We hear fixed mindsets when students announce: "Calculus is just too hard" or "I'm just not athletic". This can lead to a sense of learned helplessness.

Contrast a growth mindset in which the individual attributes success or failure to forces within his or her direct control, such as practice, effort, time management and perseverance. Here we have the belief that life holds multiple possibilities; for example,

What we know

- Personalizing learning begins when teachers know their pupils at deep levels as learners.
- Teacher expectations can have a profound influence on the mindset of their pupils.
- Learning is negatively affected when pupils are placed in low-ability groups.

if Ochan were to begin playing the violin tomorrow, she might never become a concert violinist, but with practice and determination she can get better.

Teacher expectations can have a profound influence on the development of student mindsets and future openness to learning.

Fixed mindsets in the seventh grade

In the seventh grade (Year 8) Bill was offered a choice of studying French or Spanish as a second language. He chose French and struggled through the year, ultimately earning a "D". The teacher, an extremely empathetic and kind-hearted individual, called Bill in for a conference at the end of the year. She explained that she didn't think Bill had an ear for languages and that her advice was for him to transfer to Spanish in the eighth grade as Spanish was more phonetic and he would find it easier. Fifty years later, after spending a good portion of his adult life in France, Bill is still ashamedly monolingual – perhaps as a result of a fixed mindset set in motion in the seventh grade.

Albeit well-meaning, such comfort-oriented feedback is insidious. It carries the message to the student of low teacher expectations; it is demoralizing and inhibits future learning.

Teacher expectations and neuroscience

Recent research in neuroscience suggests that when we make accurate predictions we are rewarded with a hit of dopamine – the "happy neurotransmitter." This makes evolutionary sense. When our ancestors predicted accurately where the edible roots and tubers were located, they were rewarded not just with food but also with a mild sense of euphoria courtesy of dopamine.

Expectations are a form of prediction. A teacher, who expects a student to do well on a test, feels elated when the student does so. Dopamine is at work. That's the good news.

Unfortunately, we suspect the opposite may also be true. When a teacher has low expectations and the student "lives down" to them, the teacher may also encounter a hit of dopamine. "See, I told you Johnny wasn't capable of higher level physics."

Teacher expectations are constructed

There are a number of ways in which teachers can construct positive expectations (or amend negative ones) for students:

- Explore explicitly our assumptions about students. Where did they come from? How did we develop them? Am I prematurely judgmental?
- Reframe these assumptions. Are there other ways of interpreting the data? What else might be going on here? What are some good questions about this student?
- Expel the word "ability" from our professional vocabulary.
- Practice using the word "yet", especially when a student announces that they are not good at something.
- Assess our own mindsets. A teacher with a fixed mindset about his/her own talents and intelligences may unknowingly cause students to develop similar fixed mindsets.

Conclusion

Personalizing learning begins when teachers set out to know their students at deep levels as learners. They suspend judgment. They observe them and attempt to triangulate data so as to frame meaningful questions. In this way they deliberately construct expectations that enhance learning for all.

About the authors

William (Bill) Powell and **Ochan Kusuma-Powell** are veteran international educators and currently serve as consultants for Education Across Frontiers (powell@eduxfrontiers.org). Their most recent books include: *How to Teach Now: Five Keys to Personalized Learning in the Global Classroom*, *Becoming an Emotionally Intelligent Teacher*, and *The OIQ Factor: How to Raise the Organizational Intelligence of your School*.

Further reading

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