Introduce self and role in Pearson
Encouraged to respond, and perhaps disagree in spots – so I have tried to do this.
Set up Yes, and BUT
Responding to Students, Computers and Learning

“Yes, and... but....”

1 The Research on Learning Technologies

2 Pearson’s Efficacy Agenda

3 Artificial Intelligence in Education
“Overall, the most frequent pattern that emerges in PISA data when computer use is related to students’ skills is a weak or sometimes negative association....”

Students, Computers and Learning, p. 162
Research on Learning Technologies
Meta-analysis is a technique for combining the results of multiple experiments or quasi-experiments to obtain a composite estimate of the size of the effect.

Context does matter

I'll mention two here.
Interesting result, and not unusual across the research literature. Both standardised and localised test have their champions, but it makes sense that you would have stronger results from a local test that would presumably be more likely to be testing for a specific learning outcome, than a standardised test.
Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies

- Most of the 51 studies considered undergraduate learners or older
- Students who took all or part of their class online did significantly better, on average, than those with traditional face-to-face instruction.
- The benefits were largest for those with some kind of a blended learning experience; in all cases, the combination of factors most important, not the technology.

Fortunate to work with Barbara and her team from the Center for Learning in Technology; applying their work from this study, and the book Learning Online, to a three part series with Pearson on building efficacy into learning technologies, which brings us to our next topic.
“Gaps in the digital skills of both teachers and students, difficulties in locating high-quality digital learning resources..., a lack of clarity on the learning goals, and insufficient pedagogical preparation...create a wedge between expectations and reality.”

Students, Computers and Learning, p. 190
Pearson’s Efficacy Agenda
Fundamentally, efficacy is about defining what outcomes we intend to achieve for our learners and building the capabilities to measure and improve those outcomes.
Give examples of what is being found in Revel, and in My Math Lab

- MasteringChem product was effective for students who already entered the course with higher science background.
- MML-Dev math also showed high correlation between use of MML-Dev Math and final scores, BUT a recent study where ML-Dev was used in a summer bridge course to help students who had scored low on the math entrance exam retake the test and place out of dev math
- MML-dev helped students score better on the subsequent placement test, those students did not do better in the first course-bearing course than similar students. Issue is dosage
- So, the moral of this study is, MML-dev could work, but it has to be used with enough intensity - often enough for it to be meaningful.

Impact evaluations – back to prior point

Context matters: “Whether ed tech works depends on a variety of factors such as the context in which it is used, how it is used and the characteristics of instructors and students; that's why our impact studies will measure all of these things.”
“Technology can amplify great teaching, but great technology cannot replace poor teaching.”

Students, Computers and Learning, p. 190
Artificial Intelligence in Education
Artificial Intelligence in Education (AIEd)

- What is it?
- What can it do now?
- What could it do in the future?
- What problems could it help us solve?
- How do we make the possibilities of AIEd reality?

bit.ly/IntelligenceUnleashed
Technology available today could be applied to support student learning at a scale previously unimaginable by providing one-on-one tutoring to every student, in every subject.

Existing technologies also have the capacity to provide intelligent support to learners working in a group,

and to create authentic virtual learning environments where students have the right support, at the right time, to tackle real-life problems and puzzles.

What AIEEd can offer learning right now

• An intelligent personal tutor for every learner
• Intelligent support for collaborative learning
• Intelligent virtual reality to support learning in authentic environments
The next phase of AIEd

- Help learners gain 21st century skills
- Support a “Renaissance in Assessment”
  bit.ly/renaissanceinassessment
- Embody new insights from the learning sciences
- Provide lifelong learning companions that support individual learners throughout their studies
How AIEd could help us respond to the big unsolved issues in education

- School readiness and achievement gaps
- Developing teacher expertise
- Teacher retention
- Addressing teacher shortage

The but – it cannot replace poor teaching. Well no, and I take the point. But, in the absence of good or experienced teaching, AIEd may provide us with the opportunities for students who would have nothing to have something much better.
Francesco started with a quote, so I will end with one…

Three things need to come together for digital innovations to take hold:
technology, pedagogy, change knowledge or how to secure transformation across an entire school system.
Thank You!

laurie.forcier@pearson.com

@laurie_forcier