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Ready for Any Format

Effective and Efficient use of Online and Paper Assessments
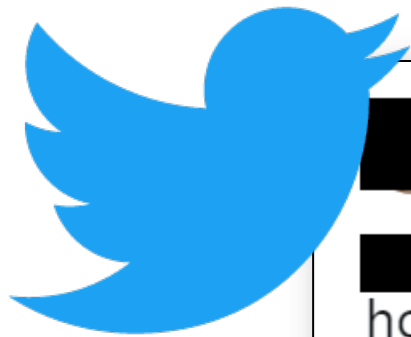
██████'s in her testing window. She came home yesterday and said, "They didn't really test my math today. They tested my typing. I'm not used to typing in math, so I was really slow and ran out of time. How can they learn what we know about math that way?"

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"Readiness" in Educational Assessment

At a minimum, assessment readiness means that schools, teachers and students are ready:

- For assessments to provide valid measures of what students know and can do

- For online/computer-based statewide summative assessments

- To use assessment data for improving classroom instruction and learning

Assessment Readiness: Practical Concerns

- Students need practice on computer-based testing (CBT)

- CBT is still difficult for some item types

- If computers do all the scoring, teachers learn less about student thought processes

- Paper and pencil (P&P) can be perceived as more time consuming, less amenable to "data collection", and less efficient

What motivated our survey?

- Elsewhere, we know of at least one large district administering paper benchmark assessments, with no plans to change

- At least one state has re-instituted paper-based testing for grades 3-6 math and ELA, and grades 5 and 8 science (http://www.fldoe.org/accountability/assessments/k-12-student-assessment/computer-based-testing.stml)

- How are California districts managing their local assessments?

Survey Administration

- Email solicitation from Caroline Fahmy, President and CEO, Educational Data Systems

  - One "reminder" email sent

- List of 860 California school district personnel

  - CA districts who had purchased services from us

  - Others who made their way onto our email list in the last year

- Option to "reply" to email or click through to an online form

Survey Limitations

- Not scientific in the sense of a carefully chosen representative sample of all CA public school districts

- Should not make generalizations to broader population

- Best to think of the instrument as a "pilot"; some issues with item wording and options

- Sketching a frame rather than painting a detailed picture

EDS Survey Item 1

1. What type(s) of district- or school-wide assessments does your district administer on **paper**? (e.g., Benchmarks/Interim assessments, Performance Tasks/Portfolios, End-of-Course assessments, or Other)

a. If you selected Other, please explain what type(s).

EDS Survey Item 2

2. What type(s) of district- or school-wide assessments does your district administer via an **online** testing platform? (e.g., Benchmarks/Interim assessments, Performance Tasks/Portfolios, End-of-Course assessments, or Other)
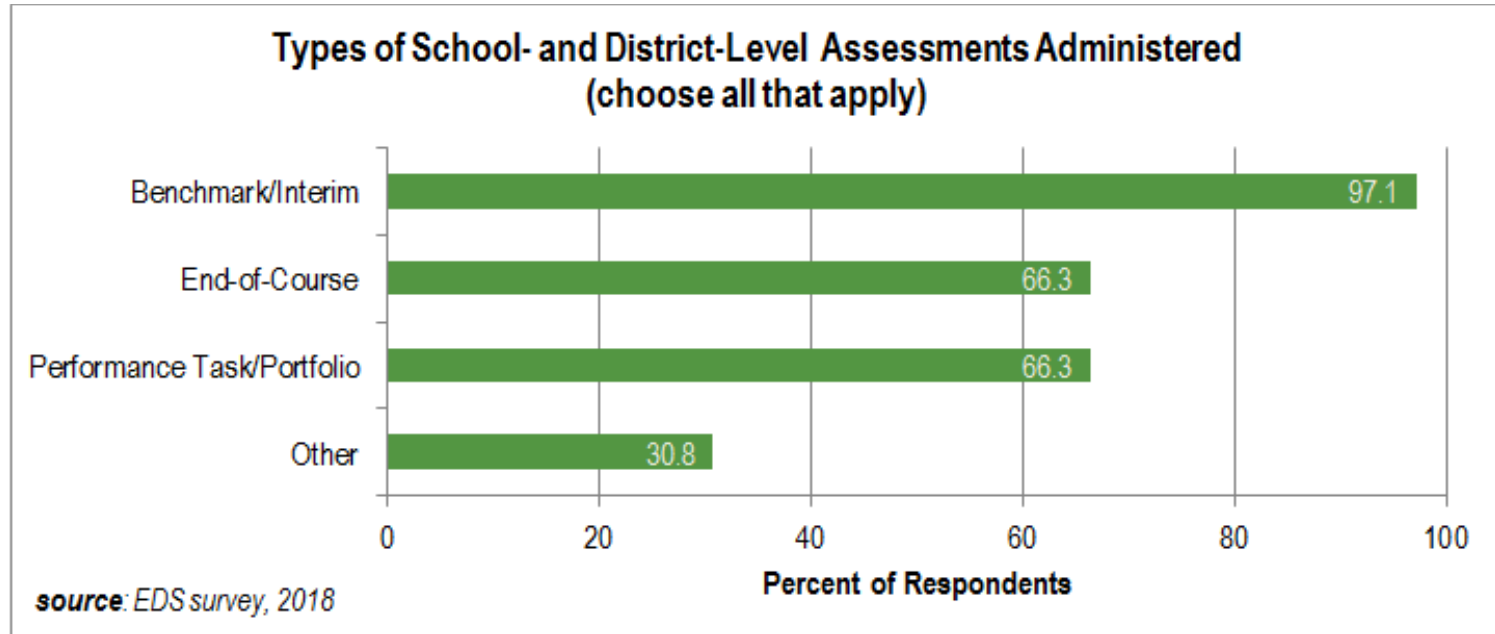
a. If you selected Other, please explain what type(s).

EDS Survey Item 3

3. Does your district have plans to change from paper to online or online to paper for any of its assessments?

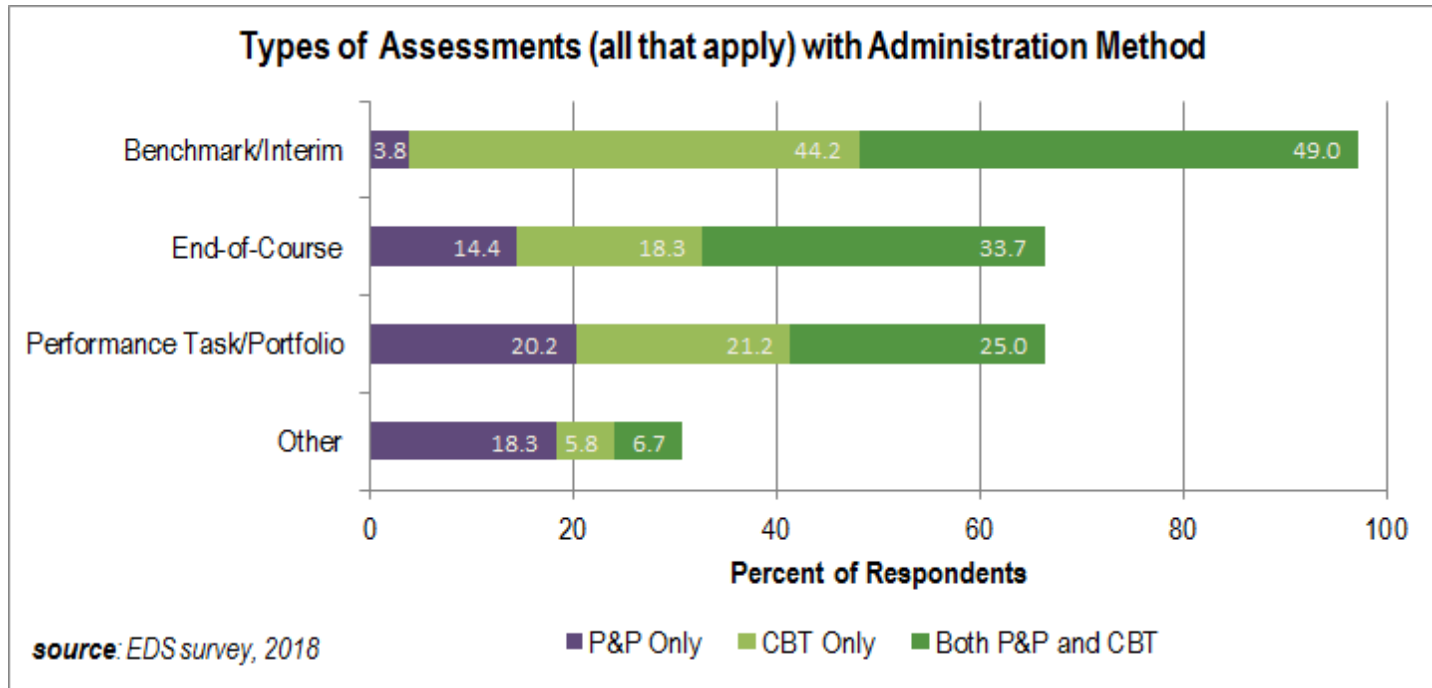a. If so, why does the district plan to make this change?

Survey Responses

- 104 people responded to the survey (response rate of 12.1%)
  - 2 via email
  - 102 via web form
- The responses were fairly complete; very few missing data points
- Open-ended responses were thoughtful

Figure 1: Types of Assessments Administered

Types of School- and District-Level Assessments Administered (choose all that apply)

Type	Percent of Respondents
Benchmark/Interim	97.1
End-of-Course	66.3
Performance Task/Portfolio	66.3
Other	30.8

Percent of Respondents

source: EDS survey, 2018

Figure 2: Assessment with Administration Method

Types of Assessments (all that apply) with Administration Method

Notes on Assessment Administration

Paper and Pencil Tests (P&P)	Computer-based, online Tests (CBT)
▪ No respondents give *only* paper and pencil tests	▪ Six respondents (5.8%) give *only* computer-based tests

Unpack "Other" Assessments

Paper and Pencil (P&P)

- DIBELS, SIM, WIAT-III
- PSAT, ACT, SAT
- Formative weekly/unit
- Math chapter tests
- 9th and 10th grade reading comprehension
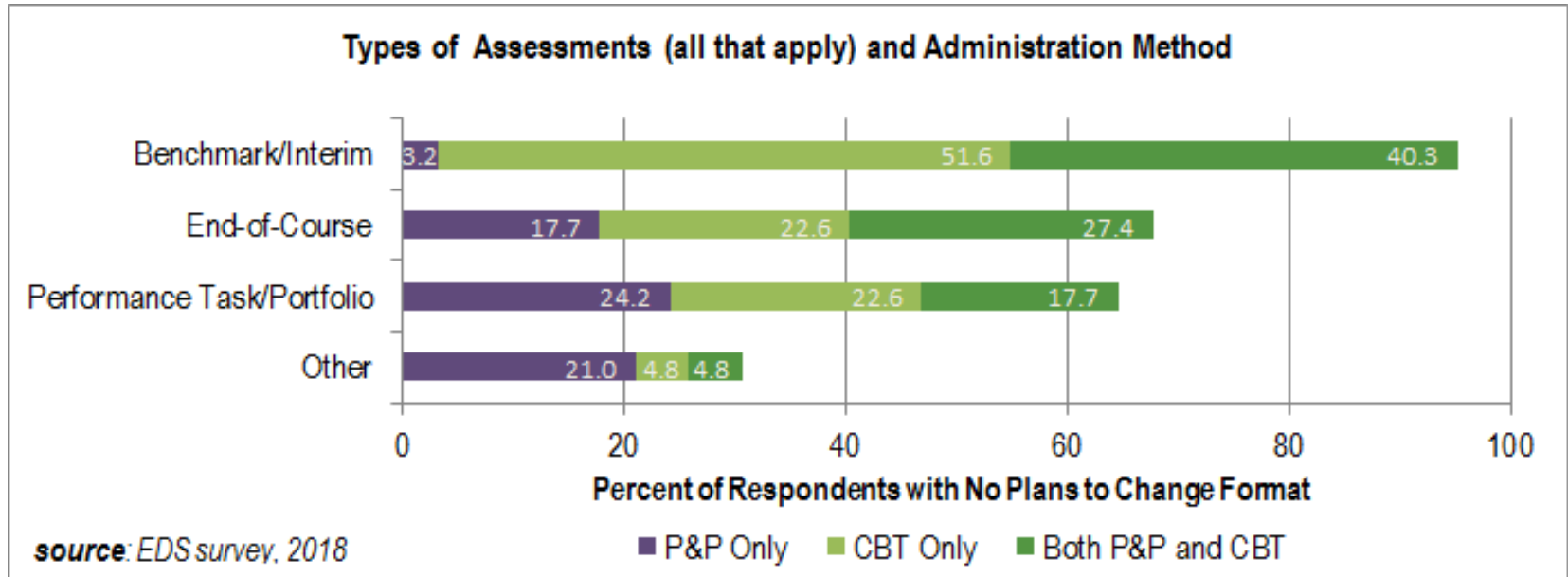- Local reading assessments

Computer-based, online (CBT)

- Reading chapter tests
- Science modules
- Common formative
- Accelerated Reader
- Course placement
- Math and reading diagnostics

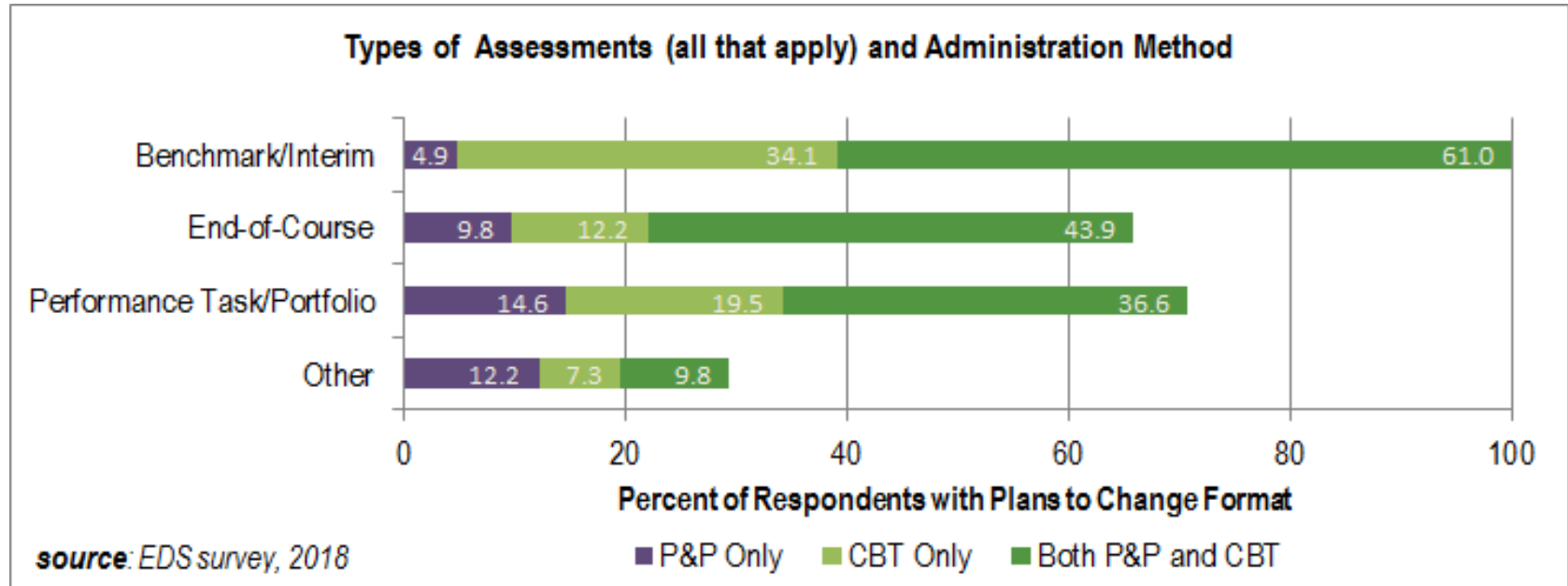# Plan to change assessment delivery format?

- "No", 59.6% of respondents
- "Yes", 39.4% of respondents
- Of the people who are planning to change and who wrote an explanation, all are going to more CBT rather than more P&P

Figure 3: No Plan to Change (59.6% of total)

Types of Assessments (all that apply) and Administration Method

Benchmark/Interim: P&P Only 3.2, CBT Only 51.6, Both P&P and CBT 40.3
End-of-Course: P&P Only 17.7, CBT Only 22.6, Both P&P and CBT 27.4
Performance Task/Portfolio: P&P Only 24.2, CBT Only 22.6, Both P&P and CBT 17.7
Other: P&P Only 21.0, CBT Only 4.8, Both P&P and CBT 4.8

Percent of Respondents with No Plans to Change Format

source: EDS survey, 2018

■ P&P Only   ■ CBT Only   ■ Both P&P and CBT

Figure 4: Plan to Change (39.4% of total)

Types of Assessments (all that apply) and Administration Method

Category	P&P Only	CBT Only	Both P&P and CBT
Benchmark/Interim	4.9	34.1	61.0
End-of-Course	9.8	12.2	43.9
Performance Task/Portfolio	14.6	19.5	36.6
Other	12.2	7.3	9.8

Percent of Respondents with Plans to Change Format

source: EDS survey, 2018

■ P&P Only ■ CBT Only ■ Both P&P and CBT

Explaining Plans for Change

- One person explained a "no" answer:

  "Pretty much all of the assessments that can be done online are currently being done online."

- Of the 41 people who said they were planning changes, 38 (97.2%) wrote answers to "why do you plan to make this change?"

Figure 5: Change Comment Categories

Comment Categories

source: EDS Survey, 2018
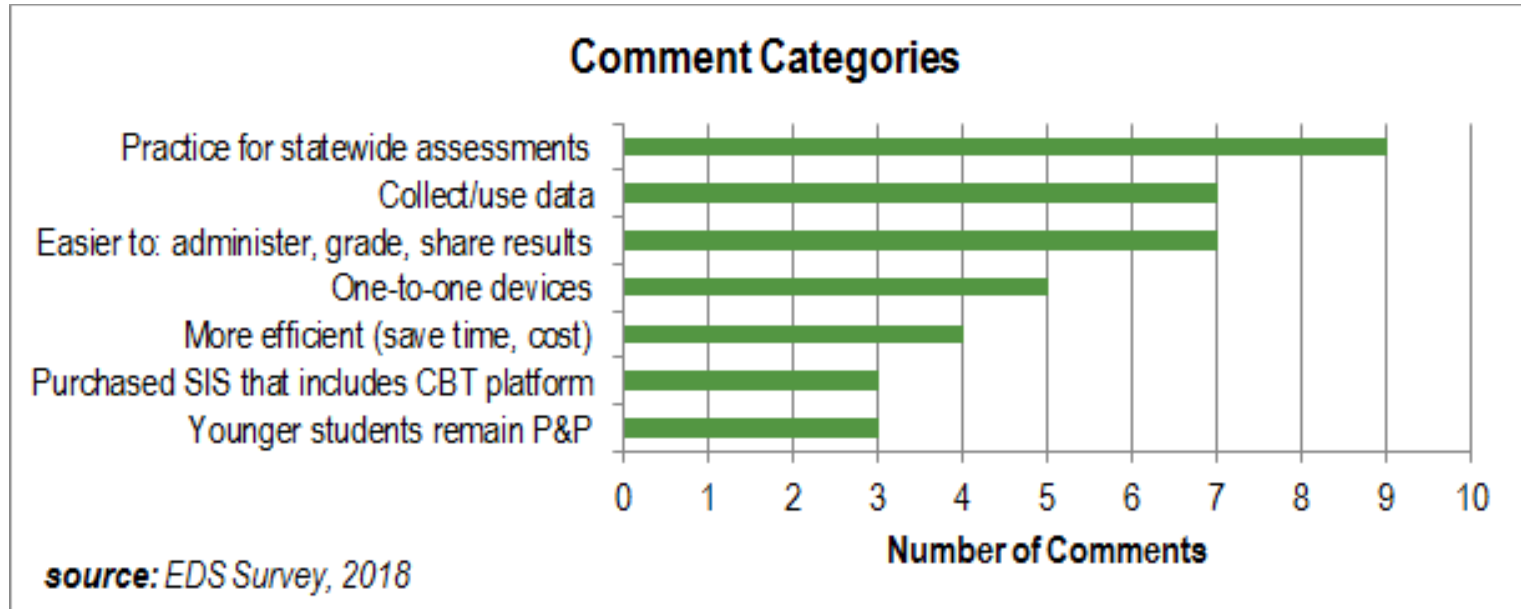
P&P-to-CBT Change: Example Written Comments

Many comments indicate multiple reasons for shifting to CBT.

- "We want to give students practice taking assessments on devices, and it is often easier to import scores or give the assessments in a system that scores them."

- "We would like to do as many of our assessments online [as possible] so students have more practice and it is easier to score."

- "Improve data driven culture and ability to analyze and share results among stakeholders"

Assessment Efficiency: Example Comments

- "To obtain assessment results faster and to import in our SIS."

- "To save cost and time."

- "cost effective, resembles state tests, we invested a lot of money in one-to-one devices"

Note the Paradox of Efficiency in Education

Larry Cuban,

8/12/2018

"In the name of efficiency and effectiveness, current students have far more access to technologies than students 35 years ago when they were initially introduced. Yet test scores and other measures of academic achievement have not climbed as more machines and software have spread through U.S. classrooms. Nor have the amounts of money being spent on these new technologies decreased as they have become ubiquitous. Another instance of the quest for efficient teaching and learning leading to inefficiency."

(https://larrycuban.wordpress.com/2018/08/12/paradoxes-of-efficiency-in-education-part-2/)

Assessment Effectiveness: Example Comments

- "[Online administration] makes data easily available as it is utilized to inform instruction."

- "…standardize our data collection and provide more valid and reliable data."

- "…we have not found great success with online assessments that require students to produce rather than select their responses (e.g. writing and speaking tasks)."

Ready to (re)Focus on the Purpose of Each Assessment

- Assessment effectiveness depends upon test validity
  - Are we measuring what we think we are?
- *Test validity depends on alignment to content*
- Sometimes the type of content knowledge in question is difficult to assess in efficient ways

For Example, Items that Need Human Scoring

Constructed response and performance task assessments require more time and effort to score quickly and fairly. Yet…

"Understanding what kids know and are able to do, and where they are on their journey helps us be more effective in addressing the learning needs of those students."

- David Foster, Silicon Valley Mathematics Initiative, EDS interview, Nov 2017

Digitize and Score P&P Assessments

qAssess™, a software-as-a-service by Educational Data Systems, combines P&P assessments with digital technology to make hand scoring more reliable and efficient, and meet the data collection goals expressed by some of our survey respondents.

- Online training and calibration for scorers
- Student work can be anonymous
- Teachers can score the work of each others' students
- Online, so no need for a "score site" geographic location
- Scores and other data are collected in electronic data files

When we blend P&P assessment with digital tools, we can take advantage of technology without sacrificing effectiveness.

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Summary

- If you are transitioning to all CBT you are not alone
- If you are using paper and plan to continue, you are not alone
- CBT makes sense for benchmarks/interims as practice for statewide assessments
- P&P makes sense for constructed response, performance tasks, and formative assessments used to inform classroom instruction
- Digital technology for scoring well-aligned P&P assessments can improve assessment efficiency and effectiveness