NC COLLABORATIVE FOR MATHEMATICS LEARNING

NC²ML Research-Practice Brief #69

How should teachers and administrators use the NC Check-Ins?

PURPOSE OF THE NC CHECK-INS:

The main purpose of NC Check-Ins is to provide students, teachers, and parents with immediate in-depth action data and a reliable estimate of students' current performance on selected subsets of content standards. Both the end-of-grade (EOG) tests and the end-of course (EOC) tests share a common item bank with the NC Check-Ins, which then exposes NC Check-In students to similar item types and rigor found on the EOGs and EOCs.

~NC Department of Public Instruction Website

What is not listed on the NCDPI website is the best practice for using these powerful tools. Luckily, research around interim and formative assessments can shed light on what to do, and what not to do, for this type of resource.

FORMATIVE DATA SHOULD BE USED IN INSTRUCTION

First and foremost, data retrieved by the NC Check-Ins are meant to help teachers with instruction (Black & Wiliam, 2005). This data is not intended for district, school, teacher, or student *accountability*. This includes school evaluations, teacher evaluations, and grades for students. Just as it is inappropriate to hold teachers accountable for materials not yet taught, students should not be held accountable for material not yet fully learned. The purpose of the NC Check-Ins is to illuminate gaps in student knowledge so that it is addressed through instruction before students are held accountable with EOG/EOCs. They are not meant to be a summative grade because mathematics is a network of ideas that builds over a long period of time, not in isolated chunks. Many standards are built across the year and cannot be assessed fully at a single point in time.

PLC Discussion Questions

1. *What role(s) should the data from the NC Check-Ins play at our school?*
2. *How are data from the NC Check-Ins being used at our school?*
3. *In what ways can administrators, coaches, and other instructional support personnel assist you in using data from the NC Check-Ins to improve teaching and learning at our school?*

One common concern with teachers involves student motivation in taking interim/formative assessments seriously. This motivation is dependent on the student/teacher relationship. A strong rapport with students and a consistent, transparent use of classroom assessments to learn and improve are two ways to motivate students and provide an accurate representation of what they know.

Although formative data should be used to make instructional decisions, this is not always the case. Results from formative assessments should never be used to summarize what students have learned, or to rank teachers, publicly or privately, within a district or across districts. Such uses depict assessment as something external to teaching and learning, emphasize sanctions and incentives over improvement and learning, and represent deliberate misuses of data that, when used to make decisions about students' future learning opportunities, are unethical (Heritage, 2005). However, when used to improve instruction, formative assessment can be effective in improving student achievement (Black & Dylan, 1998).

TESTING ENVIRONMENT

Due to the formative nature of the NC Check-Ins, these assessments should be taken like a normal classroom activity. Teachers do not need to prepare their students for the assessment, nor should they need to shut down their classroom into "testing mode". There should be little attention drawn to these assessments in the classroom or in the school other than the results are valuable tools to help students learn and teachers teach. To be clear, this includes teaching to the test. Though teachers may have access to questions prior to administration, under no circumstances should teachers share NC Check-In questions with their students, or create/use very similar items to use during instruction. Doing so only invalidates the results and renders the data useless for determining what the students know. It is important for students to experience novel items in order to show if they can transfer knowledge to a new setting. Furthermore, NC Check-In items are secure and should never be used for instructional purposes the following year because some items, due to the development schedule, may be used for multiple years.

NC Check-Ins are snap shots of student knowledge that assist teachers in determining what students have learned well and identifying areas to improve through instruction. Each question contains unique concepts and skills that, when compared to their student data, can be used to further develop student knowledge.

Four Elements of Formative Assessment (Sadler, 1989)

1) Identifying the "gap"-finding the difference between what a student knows now and the academic goal
2) Feedback-giving clear, concise information to students about how their understanding differs from the learning goal (see #4)
3) Student involvement-students should play a role in assessment, engaging in self-assessment and tying their learning to the mathematical goals
4) Learning progressions-assessments should be linked to learning progressions (see NC Instructional Frameworks)

WHAT SCORE SHOULD I EXPECT ON THE NC CHECK-INS?

The NC Check-Ins were developed to match the rigor of the End-of-Grade assessment, and not every student should be getting every question correct because of its design. Released state data shows that the "average" for NC Check-In tests is 55-60% correct, the accepted standard for large scale assessments. The more difficult items that distinguish between students at level 4 and level 5 are a great resource to determine the level of rigor represented by the standards.

WHAT TO LOOK FOR WHEN ANALYZING THE RESULTS

An additional benefit of the NC Check-Ins is access to question level data. Questions are developed with the most common student misconceptions in mind, allowing teachers to see where student thinking is incomplete or incorrect, and such information can assist teachers in customizing the learning opportunities they create for particulart students. One last important piece when reviewing the data is teachers should not focus exclusively on what students do not know. Understanding what a student knows can be just as beneficial because students use existing knowledge to learn new ideas.

Selected References

Black, P. & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy and Practice,* (*5*), 7-73.

Black, P., & Wiliam, D. (2005). *Inside the black box: Raising standards through classroom assessment*. Granada Learning.

Heritage, M. (2007). Formative assessment: What do teachers need to know and do? *Phi Delta Kappan*, *89*(2), 140-145.

Sadler, D. R. (1989). Formative assessment and the design of instructional systems. *Instructional Science,* (*18*), 130.

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NC²ML MATHEMATICS ONLINE

For more information and resources please visit the NC DPI math wiki for instructions on accessing our Canvas page created in partnership with the North Carolina Department of Public Instruction by http://maccss.ncdpi.wikispaces.net/

North Carolina Collaborative for Mathematics Learning

www.nc2ml.org