The Big Four

A simple & powerful framework
to dramatically improve instruction

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Educational leaders across the nation are trying every tactic they can to improve student achievement in their schools. Unfortunately, they are frequently overwhelmed by the many conflicting options that are available to them for instructional improvement. Change leaders are unsure where to start as they consider the multitude of ways they can improve instruction. What administrators want is one simple way to organize and implement the most-powerful improvements. What they find, however, is the opposite: numerous approaches, thousands of practices, and no simple, systematic way to organize all that is available.

At the Kansas Coaching Project, we have been working to address this issue by identifying those teaching practices that are likely to have a positive effect on the way teachers teach and the way students learn. The result of this inquiry is the Big Four, a comprehensive framework for instructional excellence made up of practices that are both easy for teachers to implement and powerful in terms of effect on teaching and learning. The Big Four framework is built around the following aspects of teaching: classroom management, content planning, instruction, and assessment for learning.

CLASSROOM MANAGEMENT

The work of Randy Sprick, Wendy Reinke, and Tricia McKale has helped us to see that a well-managed class occurs when a teacher clearly articulates expectations for all activities and transitions and then reinforces students so that they will act in alignment with those expectations. We also suggest that instructional coaches and administrators observe for the following variables in the classroom:

- Time on task: How many students are engaged in learning? We suggest a goal of 90 percent engagement.
- Ratio of interactions: How frequently does the teacher praise and correct students? We suggest that teachers use at least three times as much praise as they do corrections.
- Opportunities to respond: How frequently does the teacher prompt students to react to learning during direct instruction? We suggest at least four times per minute.

CONTENT PLANNING

The work of Keith Lenz in particular, but also Grant Wiggins, Jay McTighe, Lynn Erickson, Art Costa, and Benjamin Bloom, has helped us to see that students benefit when teachers develop

SIM
Strategic Instruction Model®

RESOURCES: CLASSROOM MANAGEMENT

- Sprick, R., Garrison, M., & Howard, L. (1998). *CHAMPs: A proactive and positive approach to classroom management.* Longmont, CO: Sopris West.
- Sprick, R., Knight, J., Reinke, W., & McKale, T. (2006). *Coaching classroom management: A toolkit for coaches and administrators.* Eugene, OR: Pacific Northwest Publishing.
- http://www.safeandcivilschools.com

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rigorous curriculum that is aligned with state standards. This curriculum can be articulated in unit questions that point to essential knowledge, understandings, and applications as well as in learning maps that depict the progression of learning within the unit.

We believe effective unit questions should be comprehensive enough to cover the core learning outlined in state standards. Teachers can develop effective questions by

- looking for verbs and nouns in standards to identify how and what students need to learn
- identifying levels of questions by considering what students need to (a) know, (b) understand, and (c) do
- considering how to construct questions that empower students to see meaning and importance in their learning

As Keith Lenz has shown with his work on Content Enhancement, and in particular the Unit Organizer, student success can be enhanced when a curriculum is depicted in learning progression maps. Effective learning maps

- illustrate the progression of learning to occur in the class
- summarize the most important ideas to be learned in a unit
- direct students toward answers to the unit questions
- are created by teachers before a unit begins

INSTRUCTION

To better understand quality instruction, we sort learning into two organizing concepts: mechanical and metaphorical. Mechanical learning refers to the learning students experience when the content to be learned is unambiguous, when the outcomes are unmistakable and straightforward, and when there is a right and wrong answer that can be clearly identified. When a teacher employs instructional practices to enact mechanical learning, often called direct instruction, the teacher wants students to master the content pretty much in the same way that he or she understands it.

Metaphorical learning shares attributes with metaphor; it is by definition ambiguous, and it functions indirectly. This type of learning has no clear right or wrong outcome. Metaphorical knowledge is complex, ambiguous, and so uniquely individual that we damage it if we reduce it to a simple set of rules or procedures. When a teacher employs instructional practices to enact

RESOURCES: CONTENT PLANNING

- Ainsworth, L. (2003). *Unwrapping the standards: A simple process to make standards manageable.* Englewood, CO: Advanced Learning Press.
- Lenz B.K., Bulgren, J., Schumaker, J., Deshler, D.D., & Boudah, D. (1994). *The unit organizer routine.* Lawrence, KS: Edge Enterprises.
- Wiggins, G., & McTighe, J., (2004). *Understanding by design.* Alexandria, VA: Association for Supervision and Curriculum Development.
- http://depot.stratepedia.org/

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metaphorical learning, often called constructivist practices, the teacher wants students to construct their own sense of what they are learning.

We have identified several teaching practices that can be used to support mechanical and metaphorical learning. Each of the following practices is used in different ways depending on the kind of learning it is meant to enable:

- Effective Questions: Questions that (a) address knowledge, understanding, or application domains of practice, (b) are open-ended or close-ended, (c) promote convergent or divergent learning.
- Thinking Devices: Provocative objects (such as cases, vignettes, news articles, short stories, quotations) that teachers use to generate conversation and dialogue in the classroom.
- Stories: Short anecdotes or narratives that teachers use to generate interest, anchor new knowledge, encourage

hope, provide a context, offer new perspectives, and build community.
- Cooperative Learning: Group learning activities that are mediated by students and in which students have shared goals and specific roles to perform.
- Experiential Learning: Structured learning activities that simulate the knowledge, understandings, or actions students are learning. Students who are participating in experiential learning activities actually "live out" the content about which they are learning.

- Project-Based Learning: Authentic, student-centered activities that engage students and promote deep learning.
- Reflection Learning: Activities that prompt students to consider and explore how knowledge, understandings, or actions being learned can be applied to their personal or community lives.

ASSESSMENT FOR LEARNING

Influenced by the work of Richard Stiggins and James Popham, we have identified a methodology for guiding teachers to create and use formative assessments. This process involves six steps:

- First, identify unit questions that summarize the essential knowledge to be acquired in a class.
- Second, answer the questions by describing what students need to know, understand, and do.
- Third, identify specific proficiencies: concise statements that precisely describe what students need to know, understand, and do to answer ques-

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RESOURCES: INSTRUCTION

- Brooks, J., & Brooks, M. (2001). *In search of understanding: The case for constructivist classrooms.* Alexandria, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C.A., & McTighe, J. (2006). *Integrating differentiated instruction and understanding by design: Connecting content and kids.* Alexandria, VA: Association for Supervision and Curriculum Development.
- http://saskschoolboards.ca/research/instruction/97-07.htm

RESOURCES: ASSESSMENT FOR LEARNING

- Popham, W.J. (2008). *Transformative Assessment.* Alexandria, VA: Association for Supervision and Curriculum Development.
- Stiggins, R.J. (1997). *Student-involved classroom assessment (3rd ed.).* Upper Saddle River, NJ: Merrill Prentice-Hall.
- Stiggins, R.J. (2004). *Student-involved assessment for learning (4th ed.).* Upper Saddle River, NJ: Merrill Prentice-Hall.
- http://www.assessmentinst.com/
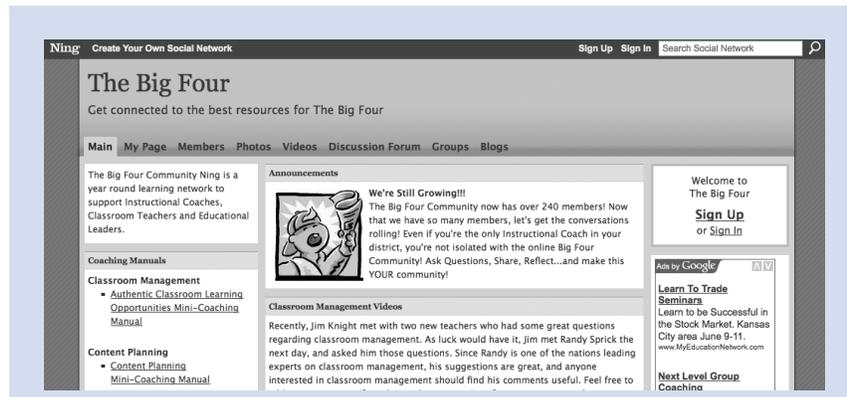
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tions.

- Fourth, identify appropriate informal assessments by creating your own or choosing from a list of 20 informal checks for understanding.
- Fifth, integrate the assessments into learning experiences effectively by assessing all students, guiding class discussion effectively, attending to non-verbal messages from students, and using pre-assessments and progress charts.
- Sixth, revisit the assessment process after you have used formative assessments to determine whether the questions, specific proficiencies, assessments, or assessment methods should be improved to better illustrate how well students are learning.

CONTINUING DEVELOPMENT OF THE BIG FOUR

The Big Four is not a finished product—indeed we hope to continually improve the tools and framework. At this point, research assistants are reviewing more than 1,000 research articles on the Big Four topics, and coaches on the Pathways to Success project and across the country are using the tools to help us identify how each practice can be improved.

You also can try out the practices and help us improve their ease of use and power to improve student learning. Several of the Big Four practices are available to be downloaded at http://

thebigfour.ning.com. You can share your experiences, ideas, and questions with us and others at the Big Four Ning. Our goal is to continually improve our tools based on our (a) research, (b) understanding of the research literature, and (c) practitioner feedback. Each year, the Big Four tools should be more powerful and easier to use. The Big Four mini-coaching manuals that exist online are free to download and free to share with other educators. Big Four updates will be communicated in Twitter through jimknight99.

Soon, you also will be able to download tools for evaluating and monitoring teachers as they progress in their use of the Big Four. A protocol for leading pro-

fessional learning communities that are planning implementation of the Big Four also will be available soon.

OTHER RESOURCES

The Big Four is a framework, simply an introduction and by no means a final statement about instruction. We hope that those who employ the framework will extend their professional learning by going deeper into each of the topics. Please use the Ning to tell us about the resources you use in each of these areas. A few resources that we have found useful for deepening our understanding of the Big Four include those listed in the boxes that accompany this article.

SOCIAL MEDIA TIPS

NING | http://www.ning.com/
Ning is a service that allows people to set up their own social networking groups. See how it works by visiting http://thebigfour.ning.com.

TWITTER | http://twitter.com/
Twitter is a service that allows you to broadcast short messages about what you are doing or thinking at any given moment and to receive messages from people you elect to follow. Sign up for an account and then start looking for people to follow, like jimknight99.

A Consideration for Change in How We Assess Students

By Jeffrey G. Reyes
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If you ask teachers, most will tell you that preparing students for high-stakes tests was not what they envisioned their jobs would be when they began their careers. The change in the mission of schools also has clouded the traditional belief that assessment—the final exam, the pop quiz—will sufficiently motivate students, leading to the question, *how do I get my students to engage?*

In recent years, we have come to discover that students whose academic performance ranks them in the bottom one-third to one-half of their class—plus all who drop out before being ranked—fail to develop the foundational reading, writing, and mathematical proficiencies needed to survive in, let alone contribute to, an increasingly technically complex and ethnically diverse culture. So today, in asking schools to leave "no child behind," society is asking that educators raise the performance of these students to a specified level of competence. We call these expectations our *academic achievement standards.* Assessment and grading procedures designed to permit only a few students to succeed must now be revised to permit the possibility that *all* students could succeed at some appropriate level.

If it is our mission to aid student success, then we must make use of a far more productive way for assessment to help students succeed.

Because *all* students can and must succeed in meeting standards, cooperation and collaboration must come into play. The driving forces must be confidence, optimism, and persistence for all, not just for some. Students must have continuous access to evidence of what they believe to be credible academic success, however small. This new understanding in recent years has spawned increased interest in *formative assessment.*

FORMATIVE ASSESSMENT REVISITED: A KEY TO SUCCESS

"Firm evidence shows that formative assessment is an essential component of classroom work and that its development can raise standards of achievement. Indeed, we know of no other way of raising standards for which such a strong prima facie case can be made."–Black and Wiliam

In 1967, Michael Scriven articulated the distinction between summative and formative program evaluation, and in 1971, Benjamin Bloom, Thomas Hastings, and George Madaus extended the differentiation to various forms of assessment. Since then, *summative* assessment has referred to tests administered after learning is supposed to have occurred to determine whether it did. *Formative* assessment has referred to assessments conducted during learning to promote, not merely judge or grade, student success.

As interest in formative assessment increases, several styles have emerged.

Test more frequently

One approach is to increase the frequency of summative assessments of standards from once to several times a year. Such evidence, supporters argue, can give notice of instruction that is not working and so can inform programmatic changes that can increase the proportion of students who meet standards. A few examples are benchmark tests, short-cycle assessments, common assessments, end-of-course examinations, and the quarterly or monthly formative standardized tests offered by some test publishers.

Those who adopt this practice see the benefit of using summative assessments in formative ways. They can identify state standards that students have not mastered early enough to permit teachers to make adjustments to promote greater success for their students. Similarly, they can identify students who are not progressing appropriately

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and can bring support services to bear. These are potent arguments in favor of this approach.

Manage data more effectively

A second trend in the emergence of formative assessment arises from the belief among some that the key to success resides not in the evidence gathered but in how that evidence is managed. The more instructional decisions are based on data, advocates contend and research shows, the more effective instruction will be.

Local school districts and commercial software developers offer computer-based, online management systems for handling student test scores. Typically, multiple-choice tests are generated from items in computerized banks that are aligned to standards, and the resulting scores reflect students' mastery of those standards.

Assessment <u>for</u> learning

A third approach to formative assessment contends that access to more frequent evidence, while potentially helpful, falls short of tapping the immense potential of formative thinking. The alternative is to use many different assessment methods to provide students, teachers, and parents with a continuing stream of evidence of student progress in mastering the knowledge and skills that underpin or lead up to state standards. This option has been labeled *assessment for learning*.

> The interventions developed by the Center for Research on Learning partner well with the concept of assessment for learning.

In short, during the learning, students are inside the assessment process, watching themselves grow, feeling in control of their success, and believing that continued success is within reach if they keep trying. When consistently carried out as a matter of routine within and across classrooms, this set of practices has been linked to achievement gains of one-half to two standard deviations on high-stakes tests, and the largest gains made are by low achievers.

CONNECTIONS TO SIM

The interventions developed by the Center for Research on Learning partner well with the concept of assessment for learning. Even though strategies and routines have not specifically been identified as formative assessment devices, some of their features clearly promote data collection during the learning process and allow students to see where they are in relation to where they want to be. Charting progress toward mastery of Learning Strategies is one example. Co-construction of Content Enhancement devices,

followed by review and checks for understanding, is another.

With these instructional devices, student success does not hinge merely on testing more frequently, on what teachers and principals do with the results, or on how efficiently the data are managed, although these things can contribute to student success. Rather, success also rests in part on what students do with and about those results.

When students begin to see the powerful connections between critical concepts, they feel in control of their own learning. That is why, for example, we would use a *Concept Mastery* diagram or a *Question Exploration* device to encourage students to explore the depth of a concept and develop their own questions to bring it into focus. At this point, when students can use strategies such as *Paragraph Writing* or *Paraphrasing* to create academically strong statements, they truly feel empowered. The combination of Content Enhancement Routines and Learning Strategies gives students more confidence, which leads to more success, which in turn leads to greater motivation.

It is critical that opportunities for students to express themselves be designed into any piece of teaching, for this will initiate the interaction through which formative assessment aids learning.

Here, we can clearly see the role that Learning Strategies and Content Enhancement Routines play in the day-to-day decision making that teachers must

engage in to continually enhance instruction in their effort to meet the needs of diverse learners. When teachers co-construct Content Enhancement devices with students using the Cue-Do-Review sequence or check for understanding during Learning Strategies instruction, students and teachers obtain the data they need to make teaching and learning adjustments. Such steps—assessment *for* learning—help students close the gap between where they are now and where we want them to be.

Adapted from the following works:
- *Formative Assessment to Assessment FOR Learning: A Path to Success in Standards-Based Schools,* 2005, by Richard J. Stiggins, founder of Assessment Training Institute, Inc., Portland, Ore., www.assessmentinst.com.
- "Assessment and Classroom Learning,"*Assessment in Education,* March 1998, by Paul Black and Dylan Wiliam.

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KU-CRL Calendar

June 16-19, 2009
SIM Strategies for Reading and Writing
Lawrence, Kan.

June 16-19, 2009
More SIM Strategies
Lawrence, Kan.

June 22-26, 2009
Institute for Potential Professional Developers in Learning Strategies
Lawrence, Kan.

June 23-26, 2009
SIM Institute: Introduction to Teaching with Content Enhancement
Lawrence, Kan.

June 24-26, 2009
SIM for Administrators
Lawrence, Kan.

August 10-12, 2009
Instructional Coaching Institute, Level 1
Lawrence, Kan.

August 12-15, 2009
Instructional Coaching Institute, Level 2
Lawrence, Kan.

October 5-7, 2009
Instructional Coaching Institute, Level 1
Lawrence, Kan.

October 8-10, 2009
Instructional Coaching Institute, Level 2
Lawrence, Kan.

http://kucrl.org/institutes

Got a SIM tip, activity, or suggestion

for the classroom?

E-mail jtollefson@ku.edu

CRL DIVISIONS, INSTITUTES, AND LABS

ALTEC: Advanced Learning Technologies in Education Consortia
http://altec.org

Division of Adult Studies
http://das.kucrl.org

e-Learning Design Laboratory
http://elearndesign.org

Institute for Research on Adolescent Learning
http://iral.kucrl.org

Kansas Coaching Project
http://instructionalcoach.org

Professional Development Research Institute
http://pdri.kucrl.org

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NEW ONLINE

International SIM Conference

We're taking steps to make the 2009 International SIM Conference as interactive as possible not only during the conference, but before and after it, too. Check out the new conference web site and leave a comment.

http://sim2009.kucrl.org

WWW.KUCRL.ORG