What Fitness Bands Can Teach Us about Classroom Assessment

A COLLEAGUE Of mine recently engaged with a new technology tool that has changed her life. She purchased and became a vigilant user of the fitness band. This wristband tracks her movement and sleep. Although fitness bands are cool tech tools, their "magic" is rooted in the continuous feedback they provide on one's progress toward fitness goals determined by age, height/weight, and activity level. This amazing device has helped my colleague lose 40 pounds and increase her activity level fourfold in the last seven months. Watching her response and seeing her success have caused me to revisit what we know about the power of formative assessment as a learning tool.

Formative assessment can be any assessment that first and foremost promotes students' learning. Many refer to this type of assessment as assessment "for" learning. In contrast, summative assessment, or assessment "of" learning, looks at grades or scores that give a final judgment or evaluation of proficiency. Assessment "for" learning is usually more informal and includes aspects of teaching. It is formative because it gathers evidence that helps teachers better meet the learning needs of students as well as empowering students to be change agents in their achievement. A host of studies have shown that when formative assessment is implemented effectively, it can greatly enhance, or even double, the speed of student learning. It is a tool that, much like the fitness band, has the potential to facilitate amazing results.

I'd like to look more closely at how the fitness band has made a difference for my colleague and apply those aspects of its formative assessment to our classrooms. First, the fitness band provides clear, timely data on the user's progress. At any moment a fitness band user can view real-time data about her or his movement (steps taken, miles traveled, active and idle time, calories burned, and so forth). For college teachers, providing students with clear and timely data on progress is challenging. Gathering and reporting data takes time. However, our students depend on feedback to help them

see if their work needs to improve and in what areas. We must work to discover small ways to efficiently gather and report on data.

Here are some possibilities:
• Short in-class quizzes that are graded in class
• Online quizzes that provide feedback right away
• One-minute quick write-ups done at the end of class that check on students' understanding, with feedback from the teacher offered in the next class

Next, the fitness band helps users see where their current data sits in relation to their goals. By learning that she has taken 7,122 steps by 11:30 a.m., my colleague sees that she has met 75 percent of her daily goal of 10,000 steps. She will need to add another 3,000 steps before bedtime. Faculty need to help students see where their work stands in relation to a clear learning goal or quality standard. Scoring their work on a rubric or scoring guide that clearly defines levels of quality can help students gauge the quality of their work and see what else is needed to meet the standard. You can also provide students with model examples or anchor papers that demonstrate target quality. You might want to include activities that have them compare their work (or that of their classmates) with these models.

Another critical component of the fitness band's work is to provide the user with feedback or tips aimed at improving their performance. For example, my colleague's sleep data indicated that it was taking her a long time to fall asleep. She received a message about creating a routine at bedtime that included examples of what she might do. It is the specific feedback that we as professors give students, describing how they can take a "next step" to improve the quality of their work, that makes a difference. In the book How Learning Works, Ambrose and her co-authors write, "Feedback is most effective when it explicitly communicates to students about some specific aspects of their performance relative to specific target

criteria, and when it provides information that helps students progress toward meeting that criterion." (p. 227) My work with faculty has shown me that this is an often-neglected practice. We are so busy, pushed and pulled in many different directions, that providing this kind of feedback to students is often not the priority it should be. We may need to redistribute our teaching tasks and reclaim those, like this one, that are so essential to learning.

Finally, the fitness band celebrates milestones using a variety of electronic methods. My colleague received a message that her step totals over the last month were in the top 10 percent of all fitness band users. She felt accomplished! Students need to have the chance to pause and reflect on how their efforts have improved their work, helped them learn, and enabled them to meet high-quality standards. As professors, we should share this feedback one-on-one with students (electronically or personally) or report on class success. Creating moments to pause and mark success generates motivation for future learning.

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Rethinking Direct Instruction in Online Learning

DIRECT INSTRUCTION HAS a bad reputation. It is often associated in higher education with long lectures and passive learners. "Passivity isn't wrong because it's boring; it's wrong because it doesn't work" (Daniel and Bizer, 2005, p. 103). Direct Instruction is an instructional model that consists of three main components: modeling, guided practice with formative feedback, and independent practice. When utilized correctly, the Direct Instruction model is anything but boring, and students should never be passive recipients of learning. Beyond the scope of a traditional classroom, there are ways to incorporate Direct Instruction in an online format. The I Do, We Do, You Do structure of Direct Instruction can be utilized to present new material, guide students through the learning process using constructive feedback, and allow space for students to feel part of a larger community of learners as they work in collaboration with peers to demonstrate their understanding. This takes intentionality and effort on behalf of the professor, but this is a worthwhile endeavor as we strive to educate our online learners.

1. I Do – Utilizing screencasts to teach effectively

Direct Instruction starts with the presentation of new material. In an online format, professors carefully select material for students to read or view, and we divide it into manageable-size modules for them to work through. However, we often leave students on their own to draw meaning from the material. By using screencasts, professors are able to demonstrate procedures, solve problems, and help students see how their reading assignments connect. Utilizing a think-aloud strategy during the screencast enables students to hear our thought processes as we analyze difficulties within our field or engage with concepts that may be new to students. Screencasts also allow us to show students how to correctly apply new information to a given situation. If we are active participants in the presentation of new material rather than just selecting appropriate readings or videos for students to passively absorb, we can use this first step of Direct Instruction as an opportunity to establish a clear learning goal for the block of learning.

2. We Do – Effectively guiding the learning process

The key element of this Direct Instruction phase is providing frequent feedback. Bocchi, Eastman, and Swift (2004) found that faculty contact and responsiveness were top expectations students had for online education. Guiding the learning process online is more difficult due to the lack of face-to-face contact we have with our students, especially in asynchronous courses, and it requires a more concerted effort on our part. Feedback throughout the learning process need not be long and detailed, unless we need to offer corrective feedback, but it ought to be substantial enough to communicate to students that they are correctly applying the newly learned material. Midweek check-ins with students allow us to determine whether we need to clarify material for a small group of students by providing an additional tutorial screencast, or arrange for synchronous meetings with individual students to reteach material or help them make appropriate connections to prior learning. We should not wait until students have submitted an assignment before offering feedback on their progress. Guided feedback corrects students during the learning process before incorrect understandings become ingrained patterns of thinking.

3. You Do – Independent learning does not have to be done in isolation

The final phase of Direct Instruction is independent practice. In the online classroom, students often feel as if everything in the course is independent learning because they are given few opportunities to collaborate with their peers. Online attrition rates are always a concern, and feelings of isolation are a leading cause for students to drop out of a course or fail to register for subsequent online classes (Park, Perry & Edwards, 2011). Having students work together to produce an authentic summative assessment piece is a powerful way to increase their feelings of support and connectedness in an online course. Afterwards, students can complete an independent reflection in which they discuss their contribution to the project and reflect on their own learning. This metacognitive activity allows us to assess their level of understanding without them feeling isolated and lacking support from the online community of learners.

Direct Instruction should be an ongoing exchange between professor and students. With effort, creativity, and the intentional use of the I Do, We Do, You Do structure, we can present new information in engaging ways, provide guided feedback as students strive to draw meaning from their new learning, and allow students the opportunity to collaborate with colleagues before independently reflecting on their own learning. The Direct Instruction model does not need to have the bad reputation that it does in education. We can use this model to revitalize our online courses so that student passivity becomes a thing of the past.

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ASSESSMENT

Discovering how to teach so that students learn is a journey. What is the next step for you as a professor striving to increase the quality of your teaching? Perhaps embracing the power of formative assessment is a step that leads in a direction you'd like to take.

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