"Those who can, do. Those who can't, teach. And those who can't teach, teach teaching."

WHOEVER coined that caustic aphorism should have been in a Harlem classroom last week, where Bill Jackson was demonstrating an exception to the rule. Jackson, a 31-year classroom veteran, was teaching the mathematics of ratios to a group of inner-city seventh graders while 15 young teachers watched attentively. Starting with a recipe for steak sauce — three parts ketchup to two parts Worcestershire sauce — Jackson patiently coaxed his kids toward little math epiphanies, never dictating answers, leaving long silences for the children to fill. "Benzel, do you agree with Katelyn's solution?" the teacher asked. And: "Can you explain to your friend why you think Kevin is right?" He rarely called on the first hand up, because that would let the other students off the hook. Sometimes the student summoned to the whiteboard was the kid who had gotten the wrong answer: the class pitched in to help her correct it, then gave her a round of applause.

After an hour the kids filed out and the teachers circled their desks for a debriefing. Despite his status as a master teacher, Jackson seemed as eager to hone his own craft as that of his colleagues. What worked? What missed the mark? Should we break this into two lessons? Did the kids get it? And what does that mean? "Does 'get it' mean getting an answer?" Jackson asked. "Or does it mean really understanding what's going on?"

At that point Deborah Kenny, the founder of the Harlem Village Academies charter schools, leaned over to me: "That right there, that is why we're starting a graduate school." How America prepares its teachers has been a subject of dismay for many years. In 2005 Arthur Levine, then the president of Teachers College at Columbia University, shocked colleagues (and himself, he says) with a scathing report concluding that teacher preparation programs "range from inadequate to appalling." Since then the outcry has only gotten more vociferous. This summer the National Council on Teacher Quality described teacher education as still "an industry of mediocrity."

The heartening news is that the universities that have so long resisted pleas to raise their standards are now beginning to have change pushed on them from outside. Governors (including New York's Andrew Cuomo, last month) are raising admission standards for state education colleges. Philanthropies like the Woodrow Wilson National Fellowship Foundation, which Levine now runs, have been pouring money into reform. And academic entrepreneurs like Kenny are arising to compete with the established schools.

"Where charter schools were 10 years ago, that's where teacher preparation is right at this moment," Kenny told me. With start-up money from the media executive Barry Diller (who says he hopes to see the venture amplified via the Internet) and a core of master teachers like Jackson, Kenny has begun to build a graduate education school that will be integrated with her K-to-12 campuses in Harlem. It will join a young cottage industry of experimental teacher training.
Of all the competing claims on America's education dollar — more technology, smaller classes, universal prekindergarten, school choice — the one option that would seem to be a no-brainer is investing in good teachers. But universities have proved largely immutable. Educators, including some inside these institutions, say universities have treated education programs as "cash cows." The schools see no incentive to change because they have plenty of applicants willing to pay full tuition, the programs are relatively cheap to run, and they are accountable to no one except accrediting agencies run by, you guessed it, education schools. It's a contented cartel.

Among reformers, there is a fair amount of consensus about what it would take to fix things. The first step is to make teacher colleges much more selective. According to one respected study, only 23 percent of American teachers — and only 14 percent in high-poverty schools — come from the top third of college graduates.

The importance of selectivity comes through vividly in "The Smartest Kids in the World," Amanda Ripley's engrossing new diagnosis of why American education lags behind the likes of Finland and Singapore. Ripley says she was initially skeptical, since most research shows little correlation between a teacher's grade-point average and classroom results. Then she went to Finland, where only top students get into teacher-training programs.

"What I hadn't realized was that setting a high bar at the beginning of the profession sends a signal to everyone else that you are serious about education and teaching is hard," Ripley told me. "When you do that, it makes it easier to make the case for paying teachers more, for giving them more autonomy in the classroom. And for kids to buy into the premise of education, it helps if they can tell that the teachers themselves are extremely well educated."

Once they are admitted, critics say, prospective teachers need more rigorous study, not just of the science and philosophy of education but of the contents, especially in math and the sciences, where America trails the best systems in Asia and Europe. A new study by the Education Policy Center at Michigan State, drawing on data from 17 countries, concluded that while American middle-school math teachers may know a lot about teaching, they often don't know very much about math. Most of them are not required to take the courses in calculus and probability that are mandatory in the best-taught programs.

"There's a big range in this country," said William Schmidt, who oversaw the study. "Some of our education programs are putting out math teachers at the level of Botswana, a developing country in Africa, and some rank up with Singapore." Unfortunately, Schmidt reckons, the Botswana-level teacher programs produce about 60 percent of America's future middle school math teachers.

Another missing component, reformers say, is sustained, intense classroom experience while being coached by masters of the profession. Too much student teaching is too superficial — less a serious apprenticeship than a drive-by. The Woodrow Wilson program, which has beachheads at 23 universities in four states, builds teacher training programs in partnership with local school districts, requires prospective teachers to spend a full year inside schools working alongside veterans, and provides three years of postgraduate mentoring in the classroom.

Kenny's plan in Harlem is to integrate teacher training with her K-12 campuses so closely that it will be analogous to a medical residency.

After my morning in Harlem I dropped by the red-brick edifice of Teachers College to meet Susan Fuhrman, who succeeded Arthur Levine as president and is a leader in the industry under siege. She began by acknowledging the criticisms — "there is a lot of mediocrity" — and added a couple of her own. States make it far too easy to get a teaching license, she said. Bad schools are protected by politics: "There's an ed school in every legislator's district, and nobody wants to close ed schools!" She favors raising admission standards and figuring out ways to hold education schools accountable for their results.

But Fuhrman finds the birth of alternative teacher schools "upsetting." "I worry about cutting that kind of preparation off from the scholarship and from emerging research" that a university offers, she said. "It can sound like I feel threatened. I don't. But it just worries me as a trend."

There are 3.3 million public school teachers in America, and they probably can't all be trained by start-ups. Raising up the standards of our university programs should be an urgent priority. But one reason for the widespread mediocrity is that universities have had a cozy, lucrative monopoly. It's about time the leaders of our education schools did feel threatened.