

Calculating the Optimal Tenure Rejection Rate in K-12 Education

Idea for Future Research

By James Sly

One of the key decisions in any educational system is whether or not to grant tenure to a new teacher. Oftentimes, teachers have an initial probationary period where they are allowed to develop their teaching skills and demonstrate their talents, at which point they might be offered a permanent teaching position and granted the protections of tenure. Not only is each individual tenure decision important, it is also critical to decide how high a bar an entire school system should set when making those determinations. Some back of the envelope calculations suggest that schools should adopt a strategy of gem hunting, where they cycle through a lot of initial candidates, evaluate each one on their merits, select only the most talented teachers, and then lock them in so they can teach for decades into the future. This is essentially what colleges do when deciding whether to grant tenure to professors, where they might reject about half of all the promising talent they bring in as new professors. Tenure systems vary considerably from state to state, but public K-12 schools do not tend to be as strict as colleges or universities when deciding to grant tenure, and I would like to write a paper that would calculate what the optimal tenure rejection rate should be for K-12 schools.

The first thing to note about this calculation is that there are actually two optimal tenure rejection rates. There is the individually rational tenure rejection rate that exists for small individual schools where the decision to reject more candidates has a trivial impact on the overall pool of teachers to select from. Then there is the collectively rational tenure rejection rate that exists for large urban school districts or entire states where the decision to reject more candidates dramatically expands the pool of new teachers that get a chance to be initially hired, and might cause the overall quality of the new teachers hired to decline as a result. Naturally, the individually rational tenure rejection rate would be much higher than the collectively rational tenure rejection rate, but since the paper would make recommendations for everyone to follow, ultimately it is the collectively rational tenure rejection rate that would be most important for policy.

Ideally, in order to calculate the individually rational tenure rejection rate, there would be testing data available for every teacher in a school system over a considerable period of time, so that an analyst could do simulations to see how the overall quality of teachers in a school system would develop depending on how selective the system is when granting tenure to new teachers. In order to calculate the collectively rational tenure rejection rate, an analyst could use variations in the total number of teachers hired from year to year (which might depend on the economy) to see how dramatically the quality of new teachers fall as the pool of new teachers hired expands. Doing this calculation would require the requisite data which may or may not exist, and some additional theoretical work to determine exactly how to do the calculation if the data were available.