Increased use of flipped classroom in higher education calls for more rigorous research into effects on student learning. In this study, we utilize two iterations of a randomized field experiment on the effects of flipped classroom. In particular, we complement recent literature by investigating heterogeneous treatment effects across teachers. The empirical setting is an undergraduate macroeconomics course with 959 students and 11 teachers. Our findings show a positive yet insignificant effect of flipped classroom on both pass rate and final exam grades. Similarly, we find no differential effect for students with different ability levels. Turning to the effect of different teachers we find large heterogeneities in their ability to reap the benefits of flipped classroom with some teachers even having negative treatment effects. These results show that even in a highly controlled environment (such as a field experiment) teachers play a large role in the effectiveness of flipped classroom. Moreover, we find substantial shifts in the ranks of teacher effectiveness between the traditional and flipped classroom classes, suggesting that the best teacher in a traditional teaching environment is not necessarily the best teacher in a flipped classroom environment.