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The Case of Public Junior High Schools in Northern Region**

### **Abstract**

This paper evaluates the impact of whether a teacher has been trained or not on basic schools performance. While there is a substantial literature on the relationship between general teacher characteristics and student achievements, public basic schools in Ghana mainly rely on trained teachers from colleges of education as part of school reform efforts. In spite of the many analyses that looked at the importance of teacher training across the world, previous studies have not been able to deal with the issue of endogeneity induced from the non-random selection of trained teachers to schools in developing countries; this study intends to fill the gap. Because a plausible estimate of the effectiveness of teacher training requires the use of an exogenous source of variation and removing the effect of other factors that may influence student achievement.

We explore a two-stage least squares method with an extensive control on school and community variables, teacher characteristics, students background and districts effects to examine the impact of trained teachers on basic schools performance using data from the northern region of Ghana. First, we used ordinary least squares method to estimate the effect of the percentage of trained teachers on average school performance with and without the inclusion of additional explanatory variables. The result shows that the effect of an increase of one percentage point of trained teachers' increases school performance by 0.0347 on the average, which is statistically significant at 5 percent. Second, we use the distances of junior high schools from the nearest teachers training college as an exogenous source of variation for the percentage of trained teachers with and without controls for additional factors. Teacher training colleges are established in every region of Ghana to train basic schoolteachers in teaching methods who are assigned to basic schools after their graduation. We demonstrate that basic schools closer to teacher training colleges have more percentage of trained teachers than those further away do. Thus, our instrumental variable strategy rests on the assumption that teacher training is the only channel through which distances of junior high schools from teacher training colleges could affect the performance of basic schools. Our IV result shows that the effect of an increase of one percentage point of trained teachers increases schools performance by 0.1 on the average, which is almost negligible.

Therefore, we find that an increase of trained teacher has a statistically significant effect, but its economic significance is very small suggesting that it is not cost-effective.