

Research & Evaluation Brief

Short-term impact: Whole child development and student leadership

Teach For Nigeria's impact on whole child development

Summary of findings from the internal draft of Teach For Nigeria Evaluation Report on Student Impact - preliminary results from end of year one of the two-year study.

This brief shares preliminary first year results from a two-year quasi-experimental study in progress by RAND Corporation in partnership with Teach For All and Hanovia Limited to evaluate the impact of Teach For Nigeria's (TFN) Leadership Development Program, focusing on the influence of fellows on whole child development in the classroom and school community. The study uses surveys to collect information from headteachers, teachers, and students in grades 3 to 6 in Ogun state using a matched pair approach to compare treatment and control schools. The qualitative component of the study uses interviews and focus groups in eight focal TFN schools. The research team collected data in October 2021 and May 2022, with plans to collect additional teacher and school level data in May 2023 to cover the full two-year leadership development experience.



With more than 5000 students surveyed from more than 80 schools in the first year of this study, the impact analysis demonstrates that the TFN program was successful in improving academic achievement: students in classrooms taught by TFN fellows scored approximately .11 standard deviations higher in mathematics and .07 standard deviations higher in literacy. These findings may be interpreted between 2-3 months of additional learning gains in literacy and 2-5 months of additional learning gains in mathematics compared to students in the comparison group¹. The qualitative insights clearly indicate parent and peer teachers' perceptions of progress in terms of student behavior and socio-emotional development; however, the quantitative analysis did not

Teach For Nigeria students can exhibit 2-5 months of learning gains over their peers.

¹ We convert the Standard Deviation growth into years of schooling for ease of interpretation by following recommendations and assumptions from Baird and Pane (2019). The ranges of months of schooling represent differing assumptions of typical standardized growth including conservative estimates from Bloom et al. 2008 and a universal average of standardized growth of 0.25 SD per year across subjects/grades from Hanushek et al. 2012. We recognize the limitations of using years of schooling as an accurate measure of learning gains given assumptions are based on studies outside of the Nigeria context.

find evidence that social and emotional skills improved more for students of TFN fellows as compared to students of non-TFN fellows in comparison schools.

Based on the qualitative data collected from eight TFN schools through interviews with headteachers and TFN fellows, as well as focus groups of peer teachers and parents of students, TFN fellows were perceived as successful in relationship building with students and parents and in demonstrating care for their students. The qualitative component also pointed to TFN fellows fostering growth-orientation among students towards learning and greater diligence toward their schoolwork, contributing to students to make noticeable academic progress. Moreover, according to qualitative evidence, students' general sense of respect for others and self-confidence reportedly improved. Additional data will be collected at the end of the 2023 academic year among the schools participating in this study to learn more about the two-year effect of fellows in fostering environments that contribute to whole child development.

RESEARCH QUESTIONS

1. What is the effect of TFN fellows on whole child development?

- What is the effect of TFN fellows on students' academic achievement and student social/emotional learning?
- How do various stakeholders (e.g., headmasters, headteachers, other teachers, students, and parents) perceive the contribution of TFN fellows on students' academic learning and social/emotional outcomes?

2. What is the effect of TFN fellows on the school community?

- What is the effect of TFN fellows on the school climate?
- What is the quality of TFN fellows' relationships with different stakeholders (e.g., headmasters, headteachers, other teachers, students, and parents)?
- How do various stakeholders (e.g., headmasters, headteachers, other teachers, students, and parents) perceive the contribution of TFN fellows on the school community?

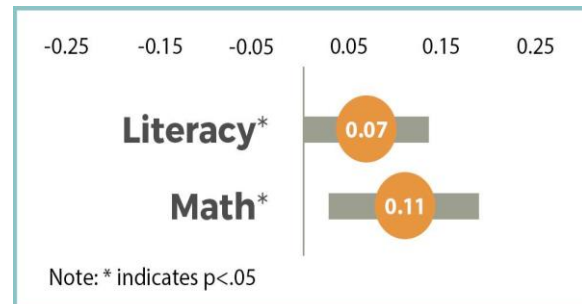
3. What is the effect of TFN fellows on student perceptions of teaching quality and classroom life? How do other stakeholders perceive the teaching quality and the classroom environments created by TFN fellows?

- What is the student perception of teaching quality and the classroom environments created by TFN fellows?
- How do other stakeholders (e.g., headmasters, headteachers, other teachers) perceive the teaching quality and the classroom environments created by TFN fellows?

Main results:

Quantitative evaluation:

- Student academic outcomes:** Students in classrooms taught by TFN fellows scored approximately .07 standard deviations higher on literacy assessments than students in comparison classrooms. Students in classrooms taught by TFN fellows scored approximately .11 standard deviations higher on mathematics assessments than students in comparison classrooms. In terms of expected impacts on educational outcomes, these can be interpreted as medium-sized effects.² These results show that TFN classrooms have up to half a year of advantage in terms of math achievement and up to a quarter of an academic year for literacy achievement compared to comparison classrooms. The study did not find significant subgroup differences driven by gender and grade level.
- Student social and emotional outcomes:** Overall, the quantitative analysis found that there were few differences in social and emotional learning between TFN students and non-TFN students. Most impact estimates were positive, non-significant and no larger than 0.06 in absolute magnitude. The study did find some significant positive differences among subgroup analyses by grade level, specifically that students improved in their social awareness and growth mindset among students in grades 6. However, subgroup analyses of the impacts on student self-efficacy in grades 4 and 6 are statistically significant and negative. The evaluators discuss that these social and emotional learning results should be interpreted with caution for multiple reasons. For instance, there is the possibility of reference bias; specifically, by virtue of participating in an intervention (such as having exposure to a TFN fellow), individuals' understanding of the behaviors and attitudes that are targeted by that intervention shift over time. Similar negative findings have been observed in other studies and in contexts where measuring differences and differences between baseline and endline with student self-report of social and emotional skills are the primary data source for student social and emotional learning.
- Effects on students' perceptions of teaching quality:** The study surveyed students about their perception of their teachers' instructional effectiveness, in particular academic press, rigor, and clarity.³ Two of three scales of the quality of TFN teachers' instruction were positive (academic press and rigor) and one had a null difference (clarity), yet all of these results are not statistically significant when comparing the differences between the baseline and endline and difference between TFN and comparison group classrooms.
- Effects on school level outcomes:** At the school level, the study was unable to detect any statistically significant effects due to the statistical power of our school sample and imbalance of school characteristics between the study's matched TFN schools and non-TFN schools. As such, any differences should be interpreted as descriptive. In terms of the direction of the impact, there were



² Evans and Fei Yuan, 2020, How Big Are Effect Sizes in International Education Studies?, Center For Global Development

³ The items used to measure student perceptions of teaching quality are based research by Ferguson et al. 2014 and the Bill and Melinda Gates Foundation Measures of Effective Teaching (MET) Study (2012).

mixed evidence of impact on school-level effects. For instance, teacher-headteacher trust, facilities and resources, and support for learning were on average stronger in TFN schools compared to the comparison group. Meanwhile, teacher-teacher trust, teacher-parent trust, and physical safety were on average lower in TFN schools compared to comparison schools.

Qualitative evaluation:

- Relationships with stakeholders:** Across six of the eight focal schools, based on respondents' perceptions, the TFN fellows' relationship with the head teacher was positive, generally described as cordial and friendly. Regarding the relationships with the parents of their students, the general consensus across respondents was that TFN fellows developed positive, warm, caring, and communicative relationships. TFN fellows' relationship with their students was consistently described as strongly positive, loving, and 'free'. While TFN fellows appear to have built strong relationships with various stakeholders and made a significant impact on the students they taught directly, respondents did not remark on any, school-wide transformations attributed to the TFN fellows in their first or second year teaching, despite TFN fellows engaging in school wide initiatives (examples of expected transformations: raising student achievement, elevating importance of social-emotional learning, improving school climate, fostering collaboration among teachers, supporting other teachers' development, increasing parent/family engagement).
- Whole child development:** With respect to academic learning, various informants, including parents, non-TFN fellows, and TFN fellows themselves remarked on noticeable improvements in students' ability to speak, read, and write in English. Based on interviewees' accounts, the TFN fellows' impact on students' social-emotional competencies was notable across all schools. Several stakeholders perceived student behavior improving not only within the classroom (e.g., listening to other students' perspectives) but also at home (e.g., apologizing for wrongdoing). Interviewees attributed students' improved behavior and sense of responsibility to the actions of TFN fellows. They also perceived that TFN fellows fostered in their students a growth-orientation towards learning and greater diligence toward their schoolwork, encouraging them to persevere.
- Teaching quality and classroom environment:** Interviewees reported that TFN fellows held rigorous and consistent expectations of their students and utilized different methods of instructional support to motivate and help students reach expectations, observed consistently across the eight focal schools. For example, TFN fellows organize student seating in groups facing each other so they can collaborate. Moreover, TFN fellows empower students to be 'free' and speak their mind openly, helping students to feel comfortable taking risks in expressing themselves by normalizing making mistakes. Interviewees also described TFN fellows modeling certain manners and behaviors that promoted courtesy and personal hygiene.

TFN fellows developed positive, warm, caring, and communicative relationships.

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Research design:

- **Data collection and tools:** The baseline and follow-up data collection for the impact study involved three types of surveys (headteachers, teachers, and students) designed to measure whole child development outcomes and factors that influence it, as well as grade-specific mathematics and literacy assessments. The data collection was conducted by Hanovia Limited in two waves: baseline data collection occurred in October – November 2021 and follow up data collection occurred in May – June 2022. The qualitative data collection was performed in May - June 2022 and consisted of in-depth interviews and focus groups. Additional data will be collected at the end of the 2023 school year to understand more about the two-year effect of TFN fellows on whole child development, classroom environment, relationships, and school-level transformations.
- **Sampling:** The total sample consisted of students, teachers and headteachers who attend schools in Ogun state, separated between 40 public primary schools where TFN fellows are placed, and 40 similar comparison schools that were selected using a “matched pairs” approach to ensure that the treatment and comparison schools serve a similar student population.⁴ Data was collected from a total sample of 80 headteachers, 180 teachers and 5900 students in grades 3-6 in Ogun State. For the qualitative study, the sample consisted of eight focal schools, where 19 TFN fellows, 8 headteachers, 16 non-TFN fellows, and 67 parents of students taught by TFN fellows participated in interviews and focus groups.
- **Data analysis:** Student data was analyzed using a difference in difference regression modeling approach, with two time periods and a single treatment and a rich set of control variables measured at baseline. The treatment effect was estimated using an ordinary least squares model, using sandwich-estimated standard errors to account for the clustering of students within schools. Classroom and school level outcomes were analyzed by employing propensity weighting in the impact estimation, given some imbalance on teacher and student level characteristics at baseline. The qualitative data was coded and analyzed by employing multiple steps and techniques such as performing a thematic analysis, searching for and examining both confirming and disconfirming evidence and summarizing key thematic findings in a matrix that facilitated cross-site analysis, and identifying common or divergent findings across the eight focal schools.

⁴ The selection of the comparison group was completed by the Ogun State Government - SUBEB representative by using an expanded list of high-need schools and geographic location of the school. Each comparison school was pair-matched with a treatment school (i.e., selected if it was in close physical proximity to the treatment school) to ensure that the treatment and comparison schools serve a similar student population. Comparison schools are also public primary schools and were selected because they currently do not implement any other teacher intervention, allowing the study to examine the impact of TFN compared to “business as usual.” Target teachers in comparison schools were selected for the study so that they teach the same grade level as teachers in the matched TFN schools.