

# EDUCATION WORKFORCE INITIATIVE

SIERRA LEONE

the  
Education  
Commission

FAB

INC.

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Icons: Noun Project

This flipbook is designed to showcase the discussion and policy papers developed by Fab Inc. (on behalf of the Education Commission), to help the Teaching Service Commission (TSC) strengthen further the education workforce. It is part of the wider Education Workforce Initiative (EWI) and builds on the *Transforming the Education Workforce* report. Sierra Leone has been a key partner in this initiative. This work builds on a phase one scoping study that focused on options to strengthen the workforce.

The aim of the project was to work with the TSC to research, analyse, and propose solutions for increasing the number of qualified, specialised and effective teachers in disadvantaged schools.

**These Education Workforce papers will be hosted online shortly. To receive these now, please contact: [alasdair.mackintosh@fabinc.co.uk](mailto:alasdair.mackintosh@fabinc.co.uk)**



**Management**



**Spatial  
Analysis**



**Supply  
and Needs**

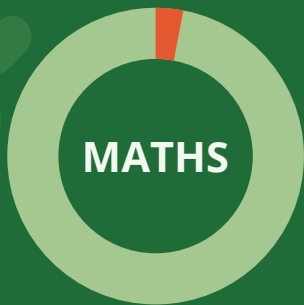


**Recruitment  
and Matching**



**Costed  
Options**

# THE SUPPLY OF MATHS & SCIENCE SPECIALIST TEACHERS WILL NEVER MEET THE NEEDS WITHOUT INTERVENTION



**Sierra Leone** is not producing enough **maths and science specialists** through their **Teacher Training Colleges (TTCs)**.

**Less than 3%** of HTC(S) and BEd trainee teachers are specialising in Maths and **less than 7%** in Science.

**Shares of 15%** are needed to meet curriculum, and **more than 32%** to resolve current shortages.

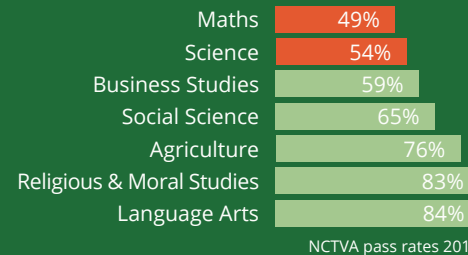
**< 5%**  
**PASS RATE**

WASSCE pass rates, 2019

Potential entrants being hindered by WASSCE pass rates of less than 5% for Maths and Science subjects



There is not enough engagement with TTCs to encourage them to produce what the education system needs



Maths and Science have the lowest TTC exam pass rates, in part driven by harder exams for technical subjects



Additional 'lab fees' of up to 30% are being charged for those specialising in Science

## Potential interventions could include:



INTERVENTIONS IN SCHOOLS TO IMPROVE LEARNING AND INCREASE POTENTIAL POOL OF TTC ENTRANTS



GREATER ENGAGEMENT WITH TTCs TO MEET THE PEDAGOGY AND SUBJECT NEEDS OF THE SYSTEM



SUBSIDIES OR LOANS TO ENCOURAGE SPECIALISATION IN TTCs, AND ATTRACT MATHS AND SCIENCE GRADUATES



REVIEW OF TTC CURRICULA AND NCTVA EXAMS TO ENSURE GREATER EQUIVALENCY ACROSS COURSES

# SHOULD I SPECIALISE IN TEACHING MATHS OR SCIENCE?



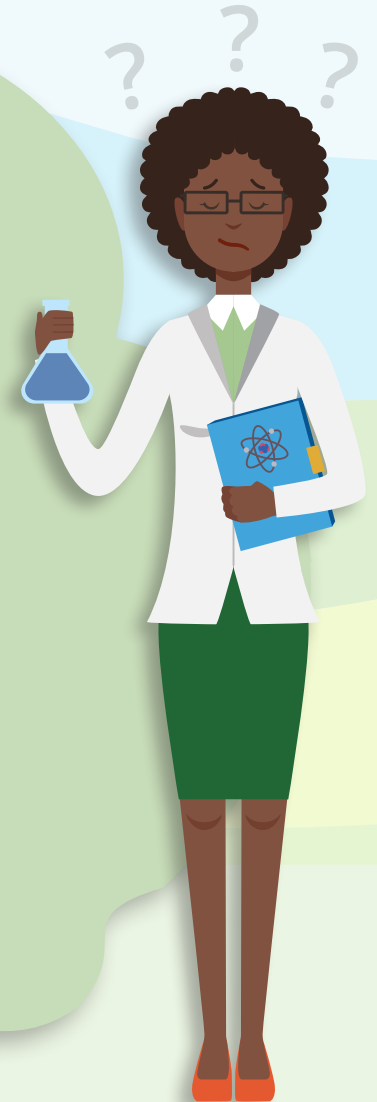
Is there any incentive or increased chance of getting on to payroll if I do?

The exams seem harder, will I be less likely to pass the costly TTC course?

What does the TTC suggest I specialise in?  
The subject with my highest WASSCE score?

We didn't have a strong specialist teacher when I was learning, so my grades are low.

Will that specialism help me in the labour market if I can't find a teaching job?

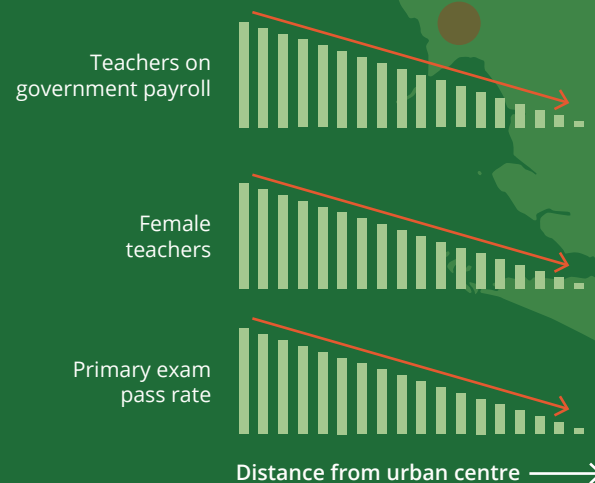


# REMOTE SCHOOLS HAVE FEWER QUALIFIED AND SPECIALISED TEACHERS

All across the country, remote schools that are more than 5km (one hour's walk) from an urban centre have the greatest challenges in attracting qualified and specialised teachers



**Primary pupil-qualified teacher ratio**



**Schools further from an urban centre perform worse across a range of indicators**



**At secondary, there are greater shortages of core subject specialists in remote schools**

## Potential interventions could include:



ENCOURAGING QUALIFIED TEACHERS TO MOVE TO AND WORK IN THESE SCHOOLS, E.G. REDISTRIBUTING, IMPROVE MATCHING, OR PROVIDE INCENTIVES



SUPPORT THOSE ALREADY LIVING AND WORKING IN THE REMOTE AREAS TO QUALIFY, E.G. PROVIDE TTC TUITION SUBSIDIES OR LOANS, AND COACHING



USE CATCHMENT AREA PLANNING TO BUILD SCHOOLS WHERE MOST NEEDED, AND IN SUFFICIENT SIZES, TO ENSURE EFFICIENT UTILISATION OF SPECIALIST TEACHERS

# SHOULD I TEACH IN A REMOTE SCHOOL?



**Will it increase my chances of getting onto payroll?**

**Will anyone notice if I don't work where I am expected to be working?**

**Will my partner be able to move with me and find employment?**

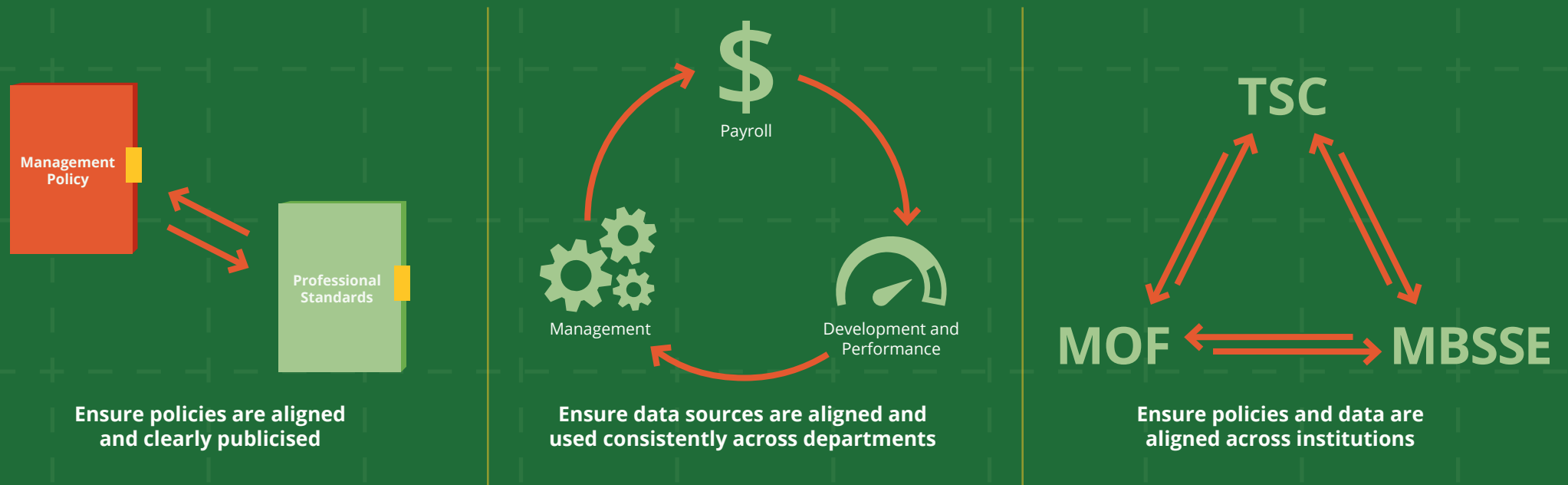
**Will there be suitable accommodation for me and my family near the school?**

**Will I be able to afford and buy what I need?**



# POLICIES AND DATA NEED TO BE ALIGNED

TSC has developed strong workforce management polices and has also started building some good data sources. However, challenges remain and it is important to:



## Potential improvements include:



CLARIFYING ANY AREAS  
OF POTENTIAL OVERLAP  
BETWEEN POLICIES



PRODUCING AND  
PUBLICISING SHORT SUMMARIES  
OF EACH POLICY



ENSURING ALL DATABASES USE THE  
SAME UNIQUE IDENTIFIERS FOR  
EACH SCHOOL AND TEACHER



TRAINING BOTH TECHNICAL AND  
SENIOR STAFF FROM ACROSS  
INSTITUTIONS ON THE DATABASES



# HOW CAN I PROGRESS AS A TEACHER?

How do I get  
on payroll?

How can I afford to  
study for additional  
qualifications?

How do I access  
training/CPD?

Will my efforts  
be recognised  
and rewarded?

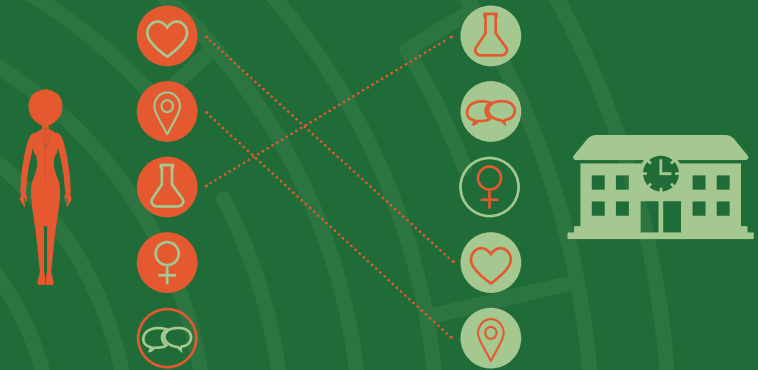
How can I transfer  
between schools  
and roles?



# IMPROVING DEPLOYMENT THROUGH A PREFERENCE MATCHING MODEL



**A solution in the health sector** for ensuring equitable access to qualified and specialised staff through matching doctor and hospital preferences in the US and Ethiopia won a Nobel Prize in 2012. Similar methods have been adapted for education in countries such as Tanzania, India and France.



**A Preference Matching Model** has been developed for Sierra Leone to improve the matching of teachers to schools. The model ensures that school needs are met and teacher preferences are taken into account to match them with schools that they would most like to work in.

## Potential benefits include:



MORE EQUITABLE DISTRIBUTIONS OF TEACHERS AND SUBJECT SPECIALISTS



INCORPORATING PREFERENCES OF TEACHERS, TO REDUCE ABSENTEEISM AND ATTRITION




REDUCED COMPLAINTS AND ARBITRATION BY TSC, DUE TO GREATER TRANSPARENCY




ABILITY TO FLEXIBLY ADAPT WORKFORCE AS DESIRED, SUCH AS TO PRIORITISE FEMALE TEACHERS

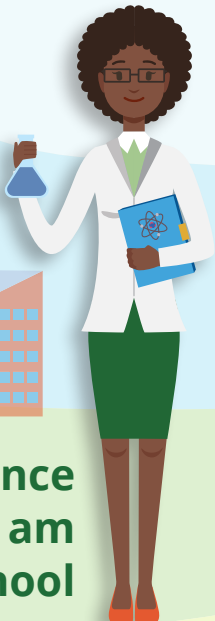
# HOW WOULD THE MODEL MATCH MY PREFERENCES TO A SCHOOL IN NEED?



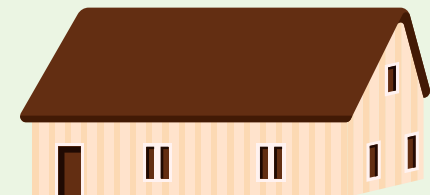
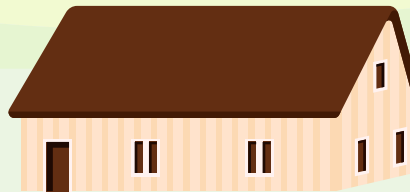
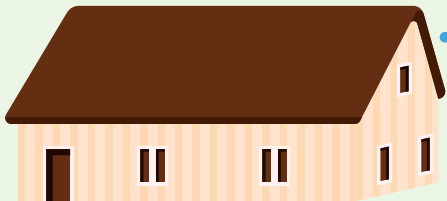
I am allocated to a school within travel distance of where I live



I am allocated to a school where I speak the same language as the community











I am a science specialist and am allocated to a school in need of one



# COSTING THE OPTIONS FOR REMOTE SCHOOL CHALLENGES

Focusing particularly on the key challenge of increasing the number of qualified, specialised and effective teachers in remote schools, a number of options were detailed and costed:

Option	Benefit	Estimated cost per year
<b>Approach 1: Encourage qualified teachers to move to and work in these schools</b>		
 <b>Redistribute teachers</b>	More equitable pupil-qualified teacher ratios (PQTRs)	<b>244 USD</b> per teacher (one-off)
 <b>Share subject specialists</b>	Greater access to subject specialists	<b>155 USD</b> per teacher
 <b>Preference Matching Model</b>	More equitable PQTRs and subject specialist access	Requires development
 <b>Remote incentives</b>	More equitable PQTRs	Requires development
<b>Approach 2: Support those in remote areas to gain teaching qualifications and skills</b>		
 <b>Provide loans for teachers to qualify</b>	Improved PQTRs	<b>315 USD</b> per teacher
 <b>Support young women to qualify</b>	Improved PQTRS and increased female teachers	<b>754 USD</b> per teacher
 <b>Expert radio lessons</b>	Improved lesson quality in remote schools	<b>243 USD</b> per class
 <b>Study camps</b>	Improved foundational learning in remote schools	<b>265 USD</b> per study camp



Fab Inc. was set up three years ago by a group of like-minded international development specialists in 2017. We aspire to be the world's best provider of cutting edge analytical knowledge to help our clients improve learning for all children.

The Education Commission is a global initiative encouraging greater progress on Sustainable Development Goal 4 – ensuring inclusive and quality education and promoting lifelong learning for all. The Commission is helping to create a pathway for reform and increased investment in education by mobilising strong evidence and analysis while engaging with world leaders, policymakers, and researchers.