Teaching Staff Characteristics and Spendings per Student in French Disadvantaged Schools

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April 2019

Introduction

Institutional Setting

Data

Middle School (Collège)

High School (Lycee general et technologique)

Vocational High School (Lycée professionnel)

Supplementary Analysis With Overtime and All Staff

Middle School After the 2015 Reform

Research Questions

Focus on Middle Schools (Collège), High schools (lycée général et technologique) and Vocational High Schools (lycée professionel)

- How teaching staff observable characteristics are distributed across secondary schools ? In particular between disadvantaged schools (Éducation prioritaire schools) and other schools ? How has it evolved since the early 2000s ?
- What is the wage gap of teaching staff between Education prioritaire and other schools ?
- How does the lower student to staff ratio in Education prioritaire compensate for this wage gap in terms of spending per student (approximated by gross wage cost per student) ?
- What is the impact of the 2015 reform, which increased the Education prioritaire bonus by 66 %, and updated the list of Education prioritaire schools ?

Main Results – Middle Schools, Before the 2015 Reform

Before the 2015 reform :

- Teachers and Principals in Education prioritaire are more likely to be contract staff, less likely to be agregés, and have on average 3 years of experience less than in other schools
- Thus, teachers and principals average gross wage (including the Education prioritaire bonus) is around 5-7% (depending if we include all staff + overtime) lower in RAR schools than in non Education prioritaire schools
- However, the student to staff ratio is around 22-38 % (depending if we include all staff + overtime) lower in RAR schools than in non Education prioritaire schools
- Spendings per student (approximated by gross wage costs per student) in RAR schools are around 12 - 29 % (depending if we include all staff + overtime) higher than in non Education prioritaire schools

Main Results – Middle Schools, After the 2015 Reform

After the 2015 reform :

- Assuming that the structure of teacher characteristics remains unchanged (2014 structure), teaching staff gross wage (including overtime bonus and Education prioritaire bonus) is 3 % higher in REP + (ex RAR)
- This is thanks to the 66 % increase in the Education prioritaire bonus in REP+ (ex RAR). Without taking into account this bonus, gross wage in non Education prioritaire is 9 % higher than in REP+
- Spendings per student (approximated by gross wage costs per student) in REP + schools are around 34 % higher than in non Education prioritaire schools (keeping the ratio student to staff same as 2014's)

Main Results – High School and Vocational High Schools

In High schools and Vocational High schools, the Education prioritaire is replaced by the Internat d'Excellence program from 2009

- Teachers and School Principals are less likely to be contract staff, equally likely to be agrégés and have on average 0.5 years of experience more in Internat d'excellence than in other schools
- This may be explained by the fact that in Internat d'excellence, teaching staff is recruited *sur pro l* i.e. "hand-picked" by school principals outside of the standard centralised assignment procedure
- Thus, teaching staff average gross wage is approximately the same in Internat d'excellence and non internat d'excellence
- The student to staff ratio is approximately the same in internat d'excellence and other schools
- The spendings per student (approximated by gross wage costs per student) is also approximately the same

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Education Prioritaire in Middle Schools

Middle School (*College*), two levels :

- Réseau Ambition Réussite (RAR) : very disadvantaged schools, with the lowest achievement levels and the highest share of very low Socio economic status (SES) students
- Réseau Réussite Scolaire (RRS) : other disadvantaged schools
- Teaching staff in RAR and RRS : annual bonus of 1,156 euros
- Major reforms between 2015 and 2018 : update of the list of the RAR (not called Rep +) and RRS (now called Rep) schools and increase of the bonus : up to 1746 euros in Rep and up to 3479 euros in Rep+

Education Prioritaire in High Schools

High Schools (*Lycee general et technologique*) and Vocaltional High Schools (Lycée professionnel) :

- Education prioritaire progressively replaced by the Internat d'Excellence program from 2009 (see Behaghel et al., 2013)
- Teachers recrutment process in Internat d'Excellence : s*ur pro l*, i.e. "hand-picked" by the school principal outside of the standard centralised assigment system

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Data (1/3)

Administrative Data on Teaching Staff and Students in Secondary School :

Teaching Staff : Teachers and School Principals :

- Middle School : 2004 - 2015
- High School + Vocational High School : 2011 - 2015

Students and their Schools :2008-2015

Caveats :

- lower bound approximation of labour costs because only gross wage (*salaire brut*, not *super brut*). Less precise than analysis of the Ministry of Education which uses different data (*Compte de l'Education*, I dont have access to this data), see Ministry of Education Brief on Total Labour Costs
- does not include all the bonuses : includes the Education prioritaire bonus but not overtime pay, the *indemnite de residence* (up to 3 %), family bonus (by number of children, up to 6 %), other ad hoc bonuses, up to 10 %, see Ministry of Education Report on Teacher Wages

Data (2/3)

More precise data for 2014 only : Supplementary comprehensive administrative Data on Teaching Staff Hours in Secondary School :

- All Teaching Staff : Teachers, Principals, Hall Monitors (surveillants), Conseiller principal d'éducation, etc.
- Detailed information on their working hours and overtime hours
- Caveat : more precise than main analysis because includes overtime pay but still lower bound of the total labour costs + does not include all the other bonuses mentioned above

Data (3/3)

Supplementary data available on the Ministry of Education website or Teacher unions websites :

- List of schools part of the Education prioritaire program after 2015 (REP+ and REP)
- List of schools part of the Internat d'Excellence program (High Schools and Vocational Schools)
- Teaching Sta wage scale
- Overtime hours pay scale

Construction of the Main Variables

Labour costs = 75% of Educational Spendings. Focus on an approximation of labour costs :

- Gross wage (not the labour cost) or traitement indiciaire brut computed using the certi cation level of the teacher (corps : Certi e, Agr ege, Contractuel) and her rank of the wage scale. We add to this the education prioritaire bonus, and for the supplementary analysis with overtime hours, the overtime bonus
- Ratio student to sta : Number of Students divided by the number of sta in the school
- Spending per student : Sum of the Gross wages in the school divided by the number of student in the school

Analysis by Percentile Rank of the Share of High SES students in the school

De nition of High SES students ; SES of main parent

- CEOs
- Professional Occupations
- Professors, scientists
- Media and entertainment
- Engineers

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Share of Contract Sta (Teachers & Principals) { Middle School

Average Nb of Years of Experience (Teachers & Principals) { Middle School

Share of Agreges Sta (Teachers & Principals) { Middle School

Ratio Student to Sta (Teachers and Principals) { Middle School

Average Monthly Gross Wage (Teachers and Principals) { Middle School

Average Monthly Spending (Teachers and Principals) per Student { Middle School

Share of Education Prioritaire Schools per Pctile Rk of Share of High SES Students in the School { Middle School

Ratio Student to Sta (Teachers and Principals) per Pctile Rk of Share of High SES Students in the School { Middle School

Average Monthly Gross Wage (Teachers and Principals) per Pctile Rk of Share of High SES Students in the School { Middle School

Average Monthly Spending (Teachers and Principals) per Student per Pctile Rk of Share of High SES Students in the School { Middle School

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Average Monthly Gross Wage (Teachers and Principals) { High School

Average Monthly Spending (Teachers and Principals) per Student { High School

Ratio Student to Sta (Teachers and Principals) per Pctile Rk of Share of High SES Students in the School { High School

Average Monthly Gross Wage (Teachers and Principals) per Pctile Rk of Share of High SES Students in the School { High School

Average Monthly Spending (Teachers and Principals) per Student per Pctile Rk of Share of High SES Students in the School { High School

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Share of Contract Sta (Teachers & Principals) { Vocational High School