Segregation and school composition effects

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Structure

1. What is the problem? Segregation or inequality?
2. School effectiveness research and school composition effect: one example in Belgium
3. Other studies
4. Interpretation of school composition effect
5. Conclusion
What is the problem? Segregation or inequality?

• In some way, segregation has become an important topic for educational and sociological studies.
• Usually, segregation is seen as an unequal distribution of students between schools, according to some characteristics: sex, ethnicity, academic and sociocultural backgrounds, ...
• But nowadays, most studies about segregation do not analyse segregation itself; theses researches evaluate segregation effects.
• In particular, most studies try to identify if segregation contributes to achievement differences among students.
In other words segregation is mainly seen as the cause of something: inequalities of achievement, wellbeing, ... among students

E.g., Research on compositional effect, school mix effect, peer effect

In all cases, the goal is to assess the effect of school composition differences
In my opinion, scientific and political debates must differentiate two different questions

- **What kind of schools do we want?** What is the meaning of school as institution? If school is seen as the main institution preparing citizens for living in a pluralistic and democratic society, every school must be a pluralistic place where children learn to live and to study with people from other backgrounds and social groups (Walzer, 1983).

- **What is the influence of school composition on students’ learning, aspirations and wellbeing, over and above students’ individual characteristics?**
2. School effectiveness research and school composition
effect: one example in French-speaking Belgium (Grade 6)

- From differences to causal inferences (school effect, corresponding to impact of school composition and/or quality of instruction)
- How to interpret differences between schools?
- Out of a random distribution of students, researchers try to construct a statistical control for individual characteristics of students
- How to explain remaining between school differences?
Répartition de la variance en langue française

- Variance entre élèves au sein des écoles: 75%
- Variance entre écoles: 25%
Part de variance expliquée par le SES des élèves
Part de variance entre élèves expliquée par le SES
Part de variance entre élèves inexpliquée
Part de variance entre écoles expliquée par le SES
Part de variance entre écoles inexpliquées

Répartition de la variance en langue française

- Variance entre élèves au sein des écoles: 10%
- Variance entre écoles: 35%

La variance entre écoles expliquée par le SES est de 40% et la variance entre élèves expliquée par le SES est de 60%.
Part de variance entre élèves

Part de variance expliquée par le SES et les résultats des élèves au prétest

Part de variance entre élèves inexpliquée

Part de variance entre écoles

Part de variance entre écoles expliquée par le SES et le prétest

Part de variance entre écoles inexpliquées

Répartition de la variance en langue française
Part de variance expliquée par le SES moyen de l'école
Part de variance entre élèves expliquée par les variables individuelles et le SES moyen
Part de variance entre élèves inexpliquée
Part de variance entre écoles expliquée par les variables individuelles et le SES moyen
Part de variance entre écoles inexpliquées

Répartition de la variance en langue française

- Variance entre élèves au sein des écoles: 54%
- Variance entre écoles: 85%
3. Other recent studies (including variables controlling for individual differences, in particular prior achievement)

<table>
<thead>
<tr>
<th>Study</th>
<th>Location</th>
<th>SC Characteristics</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opdenakker &amp; Van Damme (2001, 2006)</td>
<td>Flemish Belgium</td>
<td>Social and academic composition</td>
<td>Yes (both)</td>
</tr>
</tbody>
</table>
Studies with a longitudinal design

<table>
<thead>
<tr>
<th>Where?</th>
<th>Composition characteristics</th>
<th>Effect (on achievement growth)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rumberger &amp; Palardy (2005)</td>
<td>USA Social composition</td>
<td>Y</td>
</tr>
</tbody>
</table>
4. Interpretation of school composition effect

1. At the school level
2. At the institutional level
School composition effect is partially mediated by school practices: adaptation of instructional work and goals according to school composition.

School composition → School’s pedagogical and organisational practices (curriculum, school climate, teachers’ expectations, time on task...) → Students’ learning and aspirations

Peer effects (comparison and identification processes)
School Composition (‘net peer effect’)

Joint effect

School processes (‘net effect’)
Between-school variance (in mathematics achievement) explained

10%  17%  16%
At the institutional level

Why do we observe a significant effect in some countries and not (or very low effect) in other countries?

Institutional hypothesis: the school composition effect will be higher if:

- Between-school differences in composition are high
- Pedagogical autonomy is high (curriculum, instruction time, schoolbooks, ...)
- External assessment of students does not exist
Conclusion

- Unequal distribution of students can be seen as
  - a problem itself;
  - the cause of something (in particular inequality of opportunities of learning and achievement)
- In some contexts (in particular in Belgium), researches show that school composition has a significant (but usually small) impact on achievement
- Pupils perform better if they are in a school with pupils from ‘favourable background’ (academic or sociocultural background)
- Observed on one year, this impact is small, but its cumulative nature must be taken into account
• School composition is not the only influential source; school processes (quality of instruction) do also matter.

• We make the hypothesis of two ways of composition influence:
  • Direct peer effect: between pupils relationships, social networks, identification processes, ...
  • A mediation process: composition influences teachers expectations, real curriculum, time and opportunity to learn, ... (indirect effect)

• This indirect effect is probably higher in institutional contexts with higher pedagogical autonomy.


• More information on Girsef website (http://www.uclouvain.be/girsef) and personal webpage (http://www.girsef.ucl.ac.be/Membres/Dupriez/cv%20dupriez.html)