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Are there signs of student segregation related to foreign background during classroom work in the city of Gothenburg?

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General description on research questions, objectives and theoretical framework

Gothenburg, the second largest city of Sweden, has a rather high proportion of school segregation (index 0.26), which is above national level. Differences in school quality have been shown due to school segregation. One factor is related to effects from peer relationships (Gustafsson, 2006). Previous obstacles in measuring peer effects have now decreased (see for example Hoxby, 2000; Boozer & Cacciola, 2001; Gustafsson, 2003; Zimmerman, 2003).

A comparative study has been made by EU (Luciak, 2004) in order to scrutinize ethnic minorities within educational settings. The size of migrant and ethnic minority groups, different nationalities and ethnicities, exposed large differences between the EU-countries.. The compulsory Swedish school had 14% students with foreign background in 2002. For Sweden the decentralized school system from the 1990s has led to increased differences between municipal communities. A parallel development is seen in increased school segregation related to ethnicities within larger cities (Gustafsson, 2006). The proportion of students with foreign background differs among schools within the same municipal community is also related to one dimension of segregation. In this respect the city of Gothenburg has the 5th largest school segregation based on foreign background among students.

Segregation on the level of municipal community may be separated from segregation on school or class level. Segregated school classes within a non-segregated school may occur (Gustafsson, 2006). The overall definition of segregation in this study is related to the proportion of foreign background (Scandinavian or non-Scandinavian) within school classes.

Friendship among peers in classrooms is a result from at least two processes, social selection and social influence (Cohen, 1977; Kandel, 1978). The elasticity among networks is higher within school contexts due to a larger amount of freedom to interact with preferred individuals (van de Bunt et al., 1999). Furthermore students choose to rely on visible similarity attributes. In this respect the kind of socialization context has impact on individual choices. The school institution is characterized by a large amount of task independent preferences (de Klepper et al., 2010).

The concept segregation is known for its complexity and ambiguity. Five dimensions are often used: evenness, exposure, concentration, centralization and clustering (Massey &

Denton, 1988; Massey et al., 1996). In this study much focus is related to student clusters depending on bilateral choices. Subsequently individuals outside the class networks are clearly shown (Holfve-Sabel & Bengtsson, 2009). Segregation at school level is not discussed, instead student groups with or without foreign background and mixed groups compared among the large mixture of classes using spectral segregation index (SSI), and here especially mean SSI of networks.

The aim of the investigation was to illuminate classroom segregation due to foreign background during classroom work.

The research questions were:

Are students with Scandinavian or non-Scandinavian background willing to cooperate during classroom work?

What kind of differences or similarities exists in socio-metric small networks within classrooms comparing the 2 groups as well as gender groups?

Which patterns are seen among students of the two background categories as well as genders in relations to absence or loneliness?

Methodology

Reports from 1697 students in 78 classes in grade 6 in Gothenburg (Holfve-Sabel, 2006) were used. Each student wrote the names of the 3 peers he/she preferred working with (in the order 1-3). Foreign background was marked by names of non-Scandinavian origin and confirmed by teacher information.

The Spectral Segregation Index (SSI) was used for measurement of segregation in student groups (Holfve-Sabel & Bengtsson, 2009). The interpersonal data was assigned numerical weights; 0.6 for first choice, 0.3 for second and 0.1 for third choice. The computation used MATLAB™ software resulting in non-symmetric, weighted adjacency matrix of work relationships within the classrooms. Semi-symmetrised matrices high-lightened the network structure within each class. This means that bilateral choices were necessary to constitute any network. Individuals not included in classroom networks were labelled in the categories: absent, lonely or singles. Data analyses were performed on non-Scandinavian or Scandinavian background and gender.

Results

Of the 1697 students, 1356 had Scandinavian names. 19 of 78 classes included Scandinavian students only, 59 classes represented foreign or mixed background (range 4-100%). The minority groups were either non-Scandinavian or Scandinavian.

Student networks categorized as Scandinavian (n=67), non-Scandinavian (n=13) or mixed (n=54) showed no difference in mean SSI. Similar cohesiveness for the 3 categories was seen. Similarities also appeared when gender and background categories were investigated. When boys were compared to girls a significant difference ($p=0,004$) indicated closer networks for girls.

12 networks represented both mixed gender and background, 8 gender mixed networks represented Scandinavians. Only 1 non-Scandinavian network was gender mixed.

More absent boys than girls were found ($p=0.043$). For absent students a larger proportion without choices was seen for non-Scandinavians ($p=0.006$). Single students (chosen by other students but not reciprocal) did not differ by background or gender.

Non-Scandinavian compared to Scandinavian girls were overrepresented ($p=0.0004$) as lonely students (receiving no one's choice, but making unilateral choices), and the same appeared for the two groups of boys of different categories ($p=0.004$).

Conclusion: The networks were virtually non-segregated within mixed classes. However vulnerable individuals among absent and lonely are seen especially for non-Scandinavians girls.

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Keywords

Segregation, SSI, foreign background, gender, school classes, absent students, lonely students