

The Association Between the Secondary School Environment and Students' Self-Esteem and Behaviour

Sharon McEwen, Edward Edgerton and Jim McKechnie

*University of Paisley
Paisley
Scotland
PA1 2BE*

This paper reports two inter-related studies investigating the link between students' views of their school environment and their self-perceptions and behaviour. The findings from both studies support the assertion that students' perception of their school environment is associated with their cognitions, affect and behaviour.

Introduction

Research suggests the physical environment can have a direct impact on students' academic achievement and behaviour in school. In addition students' perceptions of their secondary school have been associated with expulsions, suspensions, violence and substance abuse (Cash, 1993).

Research suggests that the school environment also impacts on students' self-perceptions and self-esteem e.g. Eato and Lerner (1981). This becomes significant when we consider that researchers have shown a link between individuals perceptions of themselves and academic achievement. For example self-concept (Anderman, Anderman and Griesinger, 1999) and self-competence (Davidson and Greenberg, 1967) have been shown to predict academic achievement. These findings indicate that there is a need to explore in more detail the link between school environments and students' self-perceptions.

The current investment in schools has resulted in many local authorities entering into school building programmes. These programmes present an opportunity to consider the impact of changing school environments on students' self-perceptions. This paper reports two inter-related studies investigating the link between students' views of their school environment and their self-perceptions.

Study One

Introduction

Between 2000 and 2002, Glasgow City Council conducted major building work on all 29 schools under its authority. In this first study we set out to evaluate the impact of a

change in the school environment on students' self-perceptions and behaviours. Three schools participated in this study, each representing the different type of building work that was undertaken: a refurbished school, a refurbished school with an extension (combination school) and a new build school.

Method

In total 840 students were surveyed from 1st and 4th year across all three schools. Students were asked to rate their 'old' and 'new' school building, the rating given to their 'old' school was retrospective. Students completed a survey tool which assessed their perceptions of their school environment, their self-perceptions (i.e. how they felt about themselves in school) and certain undesirable school behaviours (misbehaving in class, writing on the desks and dropping litter).

Results

The results showed that 4th year students' perception of their school environment improved across all schools regardless of the type of work undertaken. However, an order effect emerged showing that the new build school was rated the highest and the refurbished school was rated the lowest. In addition, 1st and 4th year students' self-perceptions improved across all new versions of the schools regardless the type of building work. Once again an order effect was noted for 1st and 4th year students, with students from the new build school reporting the greatest improvement in their self-perceptions while students from the refurbished school reported the least improvement. The results also revealed that students across all of the 'new' schools were less likely to write on the classroom desks.

Discussion

The results show that the change in schools was perceived more positively by students in the new build school compared to the combination and refurbished schools. There are a number of explanations to account for the ordering effect. First, discussions revealed that the refurbished school experienced the greatest disruption and inconvenience as building work was completed on site. This may have had a negative effect on students' perceptions of their 'new' school. Second, in the refurbished school students were gradually exposed to the changes as they occurred. In contrast the students at the new build school experienced a complete change in their school environment and hence their school may have appeared more impressive. Finally, socio-economic factors may have had an impact. Although attempts were made to match all three schools, it was clear that students from the new build school were from a more deprived area in Glasgow. Within such an environment the impact of a new build school may have been accentuated and perceived more positively.

In relation to self-perception scores, it was apparent from post hoc comparisons that there was no difference in 1st year students' scores between the old and the new school. This suggests the order effect evident in the 'new' schools was due to a change in the environment. In contrast, post hoc comparisons revealed the same order effect for 4th year students in the 'old' and 'new' schools which suggest subsequent explanations need to be explored to explain this trend in self-perception scores across each of the schools. With regards to undesirable behaviours, the only statistical significant changes 'old' to 'new' school was writing on the desks in classrooms. Inspection of students' perceptions of their school environment revealed that the "quality of furnishings" improved across all

schools. It is hypothesised that students valued the improvement of their classroom furniture and were less likely to write on it.

This study drew attention to the link between the school environment and students' self-perceptions and behaviour. However, the researchers also identified potential improvements in the methodology and these were incorporated into the design of study two.

Study 2

Introduction

A local authority in Scotland is due to rebuild seven secondary schools within their area. This study is designed to follow the students over the length of the new building programme assessing their self-esteem, academic achievement and behaviour before during and after the building process. This design overcomes the limitations of the retrospective design used in Study 1. The increase in the number of schools in the sample and the student sample of over 3000 will allow for the validation of the previous study's findings.

However, for the purposes of this paper we report the interim findings from one of the schools at the start of this project. In total 366 students from 1st, 3rd and 5th year at two of the schools were surveyed prior to any changes in their environment. The aim of this phase of data collection was to measure the association between students' ratings of their school environment and their affect, cognitions and behaviours using both non-standardised and standardised measures.

Method

Students completed a survey tool which had a number of distinct elements. The first section assessed students' perceptions of their school environment. In contrast to Study 1 the material in this section was constructed after a series of focus groups had been conducted with students allowing the researchers to identify key areas that students considered to be of importance. The second section focused upon students self-perceptions. While Study 1 had employed an ad hoc measure of self-perception in this study we opted for standardised measures. Two measures of students' self-esteem were used. Rosenberg's (1965) Global Self-Esteem measure was used to assess students' thoughts and feelings about themselves in general and Piers and Harris (2002) Intellectual and School Status sub-scale to measure academic self-esteem. Academic self-esteem refers to students self evaluations of themselves in the context of school.

In the final section the survey tool addressed student behaviour. Based on Study 1 it was decided to expand this area to include both desirable and undesirable behaviours. Students were required to state how frequently they engaged in twenty-one behaviours.

Results

We report the findings for one of the schools in the present study. In this case the sample consisted of 116 1st year students, 161 3rd year students and 89 5th year students.

Two important points emerged from a comparison of the ratings for each category by each year. Firstly there was a high degree of consistency between each year group and their rating of 7 of the 10 items. Secondly there were inconsistencies between the ratings given to each category. It appeared that indoor sport facilities received the highest rating

of “good” whereas the toilets were rated as the lowest-“very poor”. Categories such as places to meet friends inside the school, standard and non-standard classrooms, outdoor sports facilities and dining facilities were consistently rated as “average”. No categories were rated as “very good”.

Pearson’s correlation was used to assess the degree of association between each category rating and the academic and global self-esteem scores for each year. Table 1 summarises findings and shows that for 1st year students 9 of the 10 categories correlated with their academic self-esteem (indoor sports facilities was non-significant) and 6 correlated with their global self-esteem. For 3rd and 5th year students only one category rating positively correlated with their academic self-esteem. There were no significant correlations between 3rd and 5th year students’ category ratings and global self-esteem.

Table 1: Correlations between Category Rating and Academic and Global Self-Esteem for Each Year Group

		Correlations between Category Rating and Academic and Global Self-Esteem	
		<i>Academic Self-Esteem</i>	<i>Global Self-Esteem</i>
Year Groups	<i>1st years</i>	Outside of the school building ($r^2.291$)*	Outside of the school/ playground ($r^2.182$)*
		Places to meet with friends inside the school ($r^2.156$)*	Standard classrooms ($r^2.315$)**
		Corridors and stairs ($r^2.265$)**	Non standard classrooms ($r^2.176$)*
		Standard classrooms ($r^2.334$)*	Indoor sports facilities ($r^2.258$)**
		Non standard classrooms ($r^2.246$)**	Outdoor sports facilities ($r^2.246$)**
		Toilets facilities ($r^2.259$)**	Dining facilities ($r^2.209$)**
		Outdoor sports facilities ($r^2.252$)**	
		Dining facilities ($r^2.235$)**	
		Security ($r^2.275$)**	
	<i>3rd years</i>	Places to meet with friends ($r^2.207$)**	None
<i>5th years</i>	Standard classrooms ($r^2.181$)*	None	

* Correlation significant at 0.05 significance level

**Correlation significant at the 0.01 significance level

When we consider the link between student behaviour and perceptions of the school environment it was evident that there was diversity across the school years. For example, 1st year students’ perceptions of the environment were associated with trying to work hard in class. In contrast for 3rd year students being late for class was strongly associated their perception of the school environment. Moreover 5th year students’ perceptions of their school environment was associated with being late for class and experiencing difficulty moving between classes due to the layout of the school. Such variation we believe reflects the different priorities of each year group and their varying perceptions of the environment.

Discussion

It was clear from the results that, although significant, the correlations were weak. It is likely that the range of each of the variables may have artificially lowered the correlations. Academic self-esteem ranges between 0 and 16 and global self-esteem ranges between 10- 40. The school environment categories vary in their ranges from 2-50 depending on the category. In light of this the results warrant additional investigation using statistical tests that overcome the weaknesses of correlations.

The results suggest that there are associations between students' perceptions of their physical environment and their academic self-esteem. In the case of 1st year students this also extends to global self-esteem. However, it is evident that perceptions of the school environment are more likely to be associated with academic self-esteem rather than global self-esteem.

The results highlight the degree of difference between year groups. It is possible that 1st year students place more emphasis on their environment than other year groups. Alternatively, the change in environment from primary to secondary school may have had a more dramatic impact on how 1st year students think and feel about themselves in school and in general. The findings also indicate that as students progress through school the aspects of the environment they value change and hence the association with their self-esteem also changes. These variations are also reflected in the between group differences in the associations between behaviours and perceptions of the environment.

Conclusions

The two studies have supported the view that school environments are linked to students' perceptions and feelings about themselves. In both studies it is evident that the potential impact of the environment is greatest for 1st year students. This suggests that we need to be aware that perceptions of the school environment varies as students move through the school system and place different demands or have varying expectations of their school.

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