

COGNITIVE AND AFFECTIVE OUTCOMES IN SCHOOL EFFECTIVENESS RESEARCH

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Introduction and research question

Traditionally school effectiveness research focuses on cognitive output measures, mainly on basic skills like language and arithmetic achievement. The aim of education however reaches beyond basic skills. Other skills and affective outcomes are found to be important too.

Few studies in school effectiveness research not only look at cognitive pupil outcomes but also at affective characteristics. Besides, the results of these studies are not always in accordance with each other. Rutter et al. (1979) report that cognitively effective schools are also effective for affective outcomes (i.c. the percentage of delinquent pupils at school). Brookover et al. (1979) measured the self concept of pupils and found a negative relationship between mean self concept and mean cognitive achievement of schools. Mortimore et al. (1988) again find a different result; the researchers find no relationship between affective outcomes (like behavior in school, attitudes towards school activities and self views) and cognitive outcomes. They conclude the two domains to be independent.

When correlations between affective and cognitive outcomes are calculated at the pupil level (and not after aggregation to school level) the results are more in agreement with each other. Mostly moderate positive effects are found (Hansford and Hattie, 1982). The causality direction of the relationship between affective and cognitive functioning of pupils however is not clear. In recent research Helmke (1989) found achievement to cause attitudes rather than the other way around, whereas in earlier studies affective pupil characteristics (next to other background variables) were assumed to cause achievement.

In this paper we address ourselves to the question of size and direction of the relationship between affective and cognitive outcomes on the pupil level. At the school level we look if schools that are effective in cognitive outcomes are also effective in affective outcomes.

Data and method

To answer the research questions data of a sample of about 7000 pupils of grade 6 and 8 (age groups 10 and 12) in 212 Dutch primary schools were used. Information is available on the following variables.

Cognitive outcomes measured by standardized tests:

- achievement in language
- achievement in arithmetic

Affective outcomes measured by questionnaires:

- attitude toward language
- attitude toward arithmetic
- achievement motivation
- academic self concept
- school well being

Back ground characteristics:

- intelligence (ISI)
- socio economic status of the parents
- gender
- nationality

At the pupil level pearson correlations are calculated between cognitive, affective and background pupil variables. A LISREL analysis was performed to make clear in which way affective and cognitive characteristics influence each other and the role background characteristics play in this. For the LISREL analysis the variables mentioned before, measured in grade 6 and 8, are used, but also a measure of achievement in and attitudes toward language and arithmetic, and achievement motivation, measured one year earlier (as a pretest).

At the school level rank numbers on each cognitive and affective variable for each school are computed by means of the VARCL computer programme. A three level analysis was conducted and the posterior means at the school level were saved for this goal. The ranknumbers represent the mean functioning of schools on the variables, controlled for the background variables, intelligence, SES, gender and nationality. Pearson correlations between school ranknumbers for cognitive and affective variables are computed.

Results

At the pupil level the results show that cognitive and affective pupil functioning are moderately positive related to each other. The developed LISREL model shows that there is a reason to believe that achievement causes affective functioning rather than the other way round.

At the school level small but positive correlations are found between school rank numbers on affective and cognitive outcomes.

Discussion

The developed LISREL model shows that there is a reason to believe that achievement causes affective functioning rather than the other way around. In most models and learning theories affective factors are considered as a

prerequisite for learning. The LISREL analyses are not in line with these ideas, but show that their cognitive achievement is on the contrary important for the way they think about learning and school, which in turn can influence the way they start future learning tasks.

At the school level we see the suggestion that schools can be effective in both the cognitive and the affective domain not denied. The correlations between the effectiveness and the 'affectiveness' are indeed small, but they are never negative. This means that we can conclude that effectiveness in the cognitive and affective domain can go together. In any case we cannot say that effectiveness in the one domain bothers the effectiveness in the other domain. We think we can draw a more positive conclusion: effectiveness in the cognitive domain may even fortify effectiveness in the affective domain.

Literature

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