This study investigated the mediating effect of self-talk between positive and negative statements made by teachers and students' academic self-concepts (reading, mathematics, and learning). Participants were 269 students in grades 3-7 at a middle-class, metropolitan, Australian elementary school. A research assistant administered the following instruments: (1) the "Significant Others Statements Inventory" (which measured children's perceived frequency of positive and negative statements made by parents, teachers, siblings, and peers); (2) the "Self-Talk Inventory" (which examined positive and negative self-talk); and (3) the "Self-Concepts" scale (which examined reading and mathematics self-concept). Data analysis indicated that positive self-talk did mediate between the perceived frequency of teachers' praise and students' reading self-concept. Additionally, negative self-talk predicted math self-concept, but it was not related to teacher statements. Positive statements made by teachers were more influential than negative statements as indicated by direct paths from positive statements to positive self-talk and math and learning self-concepts and the fact that negative statements were not predictive of any of the self-talk or self-concept variables. (Contains 12 references.) (SM)
Two substantive models that describe how teachers' statements and feedback may impact on students' self-concepts were located in the literature. On the basis of synthesising the findings of the previous research Blote (1995) described the following model. Teacher expectancies (A) influence the teacher's behaviour, which is reflected in how the teacher interacts with the student (B). The teacher's behaviour and interactions are then perceived, interpreted, and integrated by the student [Self-Talk] (C), who as a result changes his or her self-expectations [Self-Concepts] (D) in line with the direction of the teacher's expectations. Blote reported some dated studies which found that (a) a high frequency of positive academic feedback was associated with a high self-concept of ability (Blumenfeld et al., 1982), (b) for boys, teachers' praise was found to be associated with a high self-concept of math ability (Parsons et al., 1982), and (c) classrooms with high rates of criticism by the teacher were associated with lower students' efficacy beliefs while classrooms with high teacher-initiated interaction had students with higher efficacy beliefs (Cooper & Good, 1983).

An earlier study conducted by Craven, Marsh, and Debus (1991) outlined a more specific model to describe the influence of teachers' statements on children's self-concepts. This was done within the context of direct approaches to enhancing student's self-concepts in academic areas. Craven et al. did not emphasise the teacher expectations component highlighted by Blote (1995) when outlining an internal mediating process model whereby (A) a student is given specific performance feedback by the teacher (you did well on that maths task, good job: Positive teacher statement), (B) the student internalises the statement (I did well on that; I am good at maths tasks; well done: Positive self-talk), and (C) the student then generalises the self-talk to form or modify their maths self-concept which is comprised of an evaluative/competency/cognitive component (I am good at maths and I do well at maths) and a descriptive/affective component (I like maths and I enjoy maths) (See Burnett (1994b, 1996b) for a description of the two components of self-concept). It should be noted that steps ABC of the Craven et al. (1991) model are similar to the BCD steps of the more general Blote (1995) model. Craven et al. (1991) noted that previous self-concept enhancement researchers have not defined the specific components as to how feedback affected self-concepts but instead just assumed that performance feedback and praise lead to positive outcomes.
Aim of the Study

Blote (1995, p.225) stated that “further research is still needed on the variables mediating between teacher expectancy and student self-concept”. Accordingly, this study investigated the mediating effect of self-talk between positive and negative statements made by teachers and students’ academic self-concepts (reading, mathematics and learning).

Method

Subjects

A sample of 269 students in grades 3 to 7 at a middle class, metropolitan elementary school agreed to participate in the study. There were 144 boys and 125 girls involved in the study with a mean age of 9 years 8 months.

Instrumentation

Significant Others Statements Inventory (SOSI): Burnett (1996a) outlined the development of the SOSI which has eight subscales measuring children’s perceived frequency of positive and negative statements made by parents, teachers, siblings and peers. In this study only the teachers’ scales were administered. The reliability coefficients for the two scales for the sample used for this study were Teachers’ Negative Statements 0.70 (3 items) and Teachers’ Positive Statements 0.81 (5 items).

Self-Talk Inventory (STI): Burnett (1996a) described the development process for the STI which resulted in the emergence of two scales: a positive self-talk scale (e.g., Just stay calm, Everything will be OK, It’ll work out, I’ll do well) and a negative self-talk scale (e.g., Everyone will think I’m hopeless, This is going to be awful, I’m going to muck this up, I’m hopeless). The reliability coefficients for the 17-item Positive Self-Talk Scale (PSTS) and the 16-item Negative Self-Talk Scale (NSTS) were 0.89 and 0.86 respectively.

Self-Concepts: The self-concept scales used in this study were the reading and maths self-concept scales developed and used by Burnett (1994b, 1996b). High reliabilities (Reading Self-Concept 0.87 and Mathematics Self-Concept 0.84) were reported by Burnett (1994b). As a part of this study a Learner Self-Concept scale was developed and administered. This four-item scale was found to have an internal consistency coefficient of 0.82.

Procedures

An experienced research assistant administered the instruments described above in class time. If children experienced any problems with reading an item they were assisted. It should be noted that data was collected cross-sectionally not longitudinally.
The Model

The model tested was a saturated model with significant paths hypothesised from (a) positive statements by teachers to positive and negative self-talk; (b) negative statements by teachers to positive and negative self-talk; (c) negative self-talk to positive self-talk; (d) positive self-talk to the three facets of self-concept, and (e) negative self-talk to the three facets of self-concept. After confirming the construct validity using confirmatory factor analysis with individual items, items were paired or aggregated to form two indicators per latent construct as described by Bagozzi and Heatherton (1994) and the data were analysed using LISREL 7 within SPSS.

Results

The goodness-of-fit of data to an hypothesised model can be assessed using a number of indicators: the Goodness-of-Fit Index (GFI), the Adjusted Goodness-of-Fit Index (AGFI), the Tucker Lewis Index (TLI) and the Relative Noncentrality Index (RNI). Convention dictates that a AGFI above 0.90 (Reynolds & Walberg, 1991), and a TLI and RNI above 0.90 (Marsh, 1991) would represent a good fit of the data to the model. The following results obtained for the saturated model were GFI=0.91, AGFI=0.85, TLI=0.91, RNI=0.94, RMSR=.09, ChiSQ=178; df=65 indicating an adequate fit between the data and the hypothesised model. However, a number of hypothesised paths were not significant and these paths were removed from the model one by one until all paths in the model were significant and all modification indices were below 10. The results for the modified model were GFI=0.95, AGFI=0.91, TLI=0.95, RNI=0.98, RMSR=0.045, ChiSQ=88;df=45.

Teacher Statements       Self-Talk       Academic Self-Concepts

![Diagram showing relationships between teacher statements, self-talk, and academic self-concepts]
Discussion

The aim of this study was to investigate the mediating effect of self-talk between positive and negative statements made by teachers and their students’ academic self-concepts (reading, mathematics, and learning). The results indicated that positive self-talk does mediate between the perceived frequency of teachers’ praise and students’ reading self-concept providing support for the internal mediating model forwarded by Craven et al. (1991). Additionally, negative self-talk was found to be predictive of maths self-concept but negative self-talk was not related to teacher statements which was needed to support the mediating model. Furthermore, the results indicated that positive statements made by teachers were more influential than negative statements as indicated by direct paths from positive statements to positive self-talk and maths and learning self-concepts and the fact that negative statements were not predictive of any of the self-talk or self-concept variables.

Further research is still needed to investigate utility of the internal mediating model in specific contexts. For example, in this study positive and negative statements by teachers and self-talk were measured in general terms but both of these constructs can be operationalised in more specific terms that are context specific. For example, a study is needed which investigates the internal mediating model in a maths context whereby the students’ perceived frequency of maths related performance feedback given by a teacher is related to maths specific self-talk and to the descriptive and evaluative components of maths self-concept. This model could also be investigated in reading, social studies, art, or music contexts.

References


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