



## The cross-cultural generalizability of a new structural model of academic self-concepts

Martin Brunner<sup>\*</sup>, Ulrich Keller, Caroline Hornung, Monique Reichert, Romain Martin

University of Luxembourg, Research Unit for Educational Measurement and Applied Cognitive Science (EMACS), Luxembourg, Luxembourg

### ARTICLE INFO

#### Article history:

Received 4 April 2008

Received in revised form 19 September 2008

Accepted 29 November 2008

#### Keywords:

Academic self-concept

Achievement

Gender

Confirmatory factor analysis

Cross-cultural research

### ABSTRACT

Prior research on the structure of academic self-concepts has demonstrated academic self-concepts to be domain-specific and hierarchically organized, but has largely failed to support the hypothesis that general academic self-concept is at the apex of the hierarchy. The present study investigates a new multidimensional nested-factor model of academic self-concepts that incorporates both domain-specific and general academic self-concepts, and the position of general academic self-concept at the apex of the self-concept hierarchy. Data were obtained from representative samples of 15-year-old students in 26 countries (total  $N = 106,680$ ). Results showed that the nested-factor model provided a good fit to the data in each of the 26 countries, and that general and domain-specific academic self-concepts were meaningfully related to gender as well as to student achievement. Moreover, it emerged that the relationships between academic self-concepts and these student characteristics may differ substantially depending on whether the model applied does or does not account for the influence of general academic self-concept on domain-specific measures of academic self-concepts.

© 2008 Elsevier Inc. All rights reserved.

Academic self-concepts are mental representations of one's abilities in academic domains. They entail aspects of both self-description and self-evaluation and vary in their generality (Marsh & Craven, 1997; Valentine, DuBois, & Cooper, 2004). The domain-general academic self-concept ("I am good at most school subjects") has been distinguished from domain-specific academic self-concepts, which reflect an individual's impression of his or her ability in a specific academic domain, such as mathematics or verbal skills (e.g., "I am quite good at mathematics"; "My vocabulary is poor"). Crucially, students differ in how they describe and evaluate their academic abilities in particular domains as well as across domains.

Two aspects of theories on academic self-concepts can be identified (cf. Edwards & Bagozzi, 2000): one that addresses relationships between (latent) academic self-concepts and other theoretical constructs and one that focuses on the relationships between (latent) academic self-concepts and corresponding (manifest) measures. The second aspect, in particular, has proved an empirical challenge: Which parsimonious and theoretically founded structural model is able to account for individual differences in measures of academic self-concept? The influential theory developed by Shavelson, Hubner, and Stanton (1976) proposed that academic self-concepts are (a) domain-specific and (b) hierarchically organized, with general academic self-

concept at the apex. Previous empirical research strongly has supported the hypothesis of domain-specificity (Marsh, 1990b; Marsh, Byrne, & Shavelson, 1988; Marsh, Smith, & Barnes, 1985), but has largely failed to find a well-fitting structural model with general academic self-concept at its apex (Yeung et al., 2000).

The purpose of this article is to present strong cross-cultural empirical evidence for a new multidimensional structural model of academic self-concepts (Brunner, Lüdtke, & Trautwein, 2008) that accounts for both theoretical assumptions of Shavelson and colleagues: the domain-specificity of academic self-concepts and the position of general academic self-concept at the apex of the self-concept hierarchy. To this end, we used data from representative samples of over 100,000 15-year-old students in 26 countries (Organisation for Economic Co-operation and Development [OECD], 2001).

### 1. Research on the structure of academic self-concepts

The structure of self-concepts has inspired a great deal of empirical research. Empirical investigations prior to the 1980s showed shortcomings in both their theoretical rationale and the measurement instruments used (Marsh, 1990b; Shavelson et al., 1976). Specifically, many researchers failed to distinguish carefully between different facets of self-concept. For instance, no distinction was made between self-esteem—a global evaluation of the self—and domain-specific self-concepts—evaluations of specific abilities or qualities in different domains. To overcome this deficit, Shavelson et al. (1976) developed a multifaceted and hierarchically structured model of self-concept.

<sup>\*</sup> Corresponding author. University of Luxembourg, The Faculty of Language and Literature, Humanities, Arts and Education, Research Unit for Educational Measurement and Applied Cognitive Science (EMACS), Campus Walferdange, B.P. 2, L-7201 Walferdange, Luxembourg. Tel.: +352 466 644 9512.

E-mail address: [martin.brunner@uni.lu](mailto:martin.brunner@uni.lu) (M. Brunner).

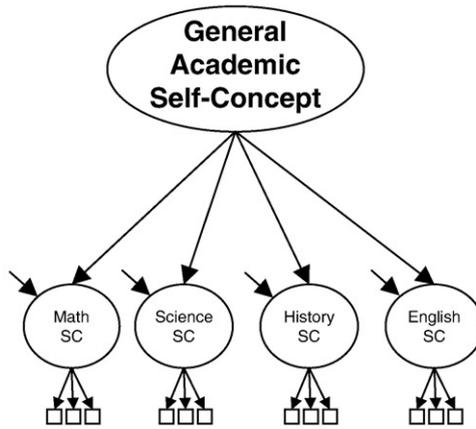
Their model defined general self (or self-esteem) as the most general level of self-concept. At the next level, they differentiated general academic self-concept from three non-academic self-concept domains. General academic self-concept was further divided into various subdomains (Fig. 1a).

The academic section of the Shavelson et al. model was scrutinized by Marsh and colleagues in a series of studies (Marsh, 1990b; Marsh, Byrne, et al., 1988; Marsh et al., 1985). In order to test the multifaceted nature of academic self-concepts, they represented domain-specific and domain-general academic self-concepts as first-order factors (see Fig. 1b for a prototypical model). Marsh's group found abundant empirical support for this first-order factor model of

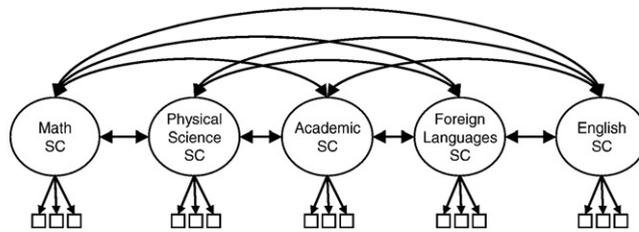
academic self-concepts, and showed that it was reasonably invariant across 25 countries (Marsh, Hau, Artelt, Baumert, & Peschar, 2006).

However, empirical support for the hierarchical nature of self-concept within the academic domain—a matter of specific relevance to the present study—was limited. Although general academic self-concept correlated with both verbal and mathematics self-concept, verbal and mathematics self-concept were either uncorrelated (Marsh, Byrne, et al., 1988; Marsh et al., 1985) or showed only a modest positive correlation (Marsh, 1990b). Accordingly, a structural model with one higher-order factor representing general academic self-concept with one higher-order factor representing general academic self-concept (cf. Fig. 1a) failed to explain the pattern of intercorrelations among the first-order factors (representing domain-specific

**a The academic section of the Shavelson Model**



**b First-order Factor Model of Academic Self-Concepts**



**c The Marsh/Shavelson Model**

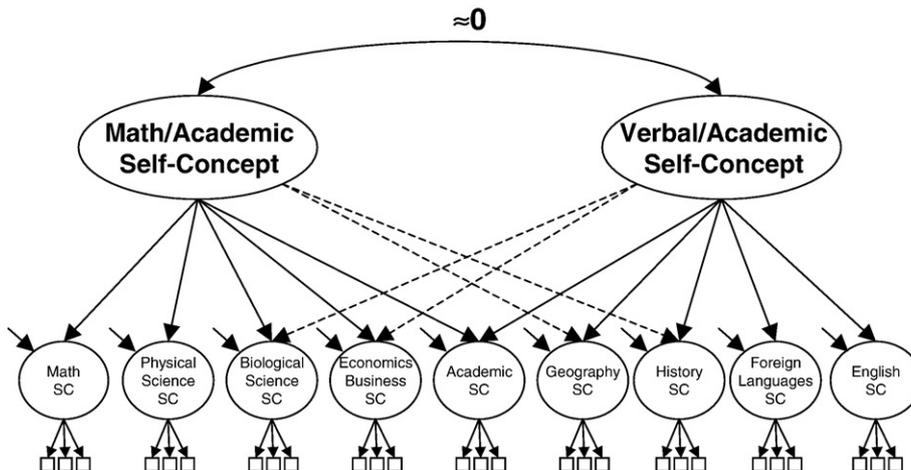


Fig. 1. Structural conceptions of academic self-concepts (SC): (a) The academic section of the original model by Shavelson et al. (1976), (b) a first-order factor model of academic self-concepts, and (c) an elaboration of the Marsh/Shavelson model. (a) and (c) based on Marsh et al. (1988, p. 378).

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات